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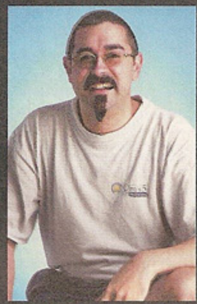
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Month in View

Ben Vost has a thought or two to share with you, dear reader.

Ten years old, eh? I can remember when I was... actually no, I can't. I'm old and my memory's going, sorry. But I do remember the first issue of *Amiga Format*, and the issue you hold in your hands now bears little resemblance to the first mag, except in the names of its sections and, oh yes, its title. Over the years, *AF* has constantly improved and I think we're now doing better than ever for you. Our reviews are much more in-depth, we have more interaction with our audience and our design and layout is clearer than it has ever been.



Ben Vost
Editor

Change is a constant. Even now we are improving the magazine – you may notice some of the improvements in this issue – and we shall continue to do so as long as the magazine runs.

It seems that change is in the air generally. After more than five years of waiting (since Commodore went bust), it really looks as if we may get a new Amiga this year, and it will be as groundbreaking as the first one was back in 1985. Amiga (the company, not the machine) are actually being quite helpful and are keen on promoting the new machine solely in existing Amiga (the machine, not the company) magazines first and foremost, meaning that you can expect all the news about the new machines as soon as we have it.

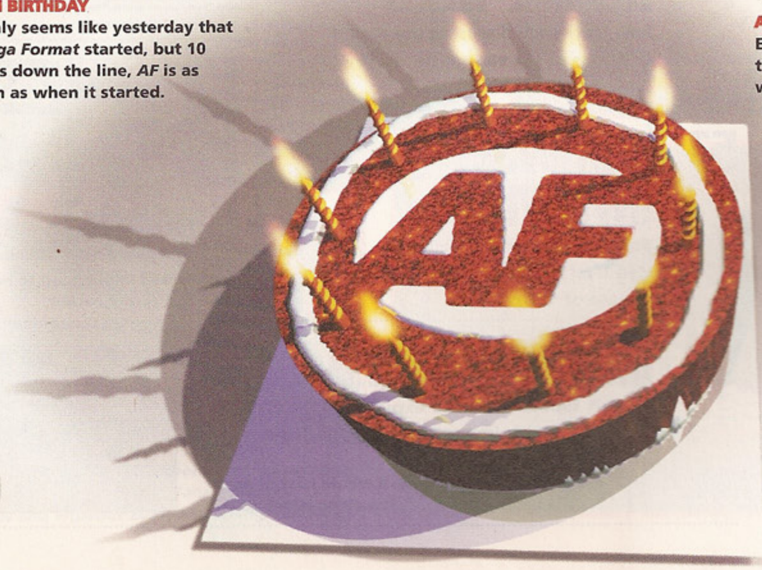
Their attitude towards developers doesn't seem to have improved yet, but if this new, revitalised Amiga are putting all their efforts into development themselves, I guess that we should all be grateful.

The only thing that's really irritating is their name. I must admit I got slightly batey when people got confused about the difference between Amiga International and Amiga Inc., but that was no reason to dump the company's identifier just like that. If anything, it's more confusing now to have the same name for the machine and the company than it was to get Int. and Inc. confused, but even that's not going to last much longer. Expect a new name shortly, and a big announcement from whatever they're called...



14

THE NEW AMIGA
Looks good, doesn't it? There are plenty more where that came from too, along with another interview with the man himself, Jim Collas.



19

10TH BIRTHDAY
It only seems like yesterday that *Amiga Format* started, but 10 years down the line, *AF* is as fresh as when it started.



28

AUDIO MIXER PROJECT
Ever wanted to get sound from your CD and Amiga at the same time, all in one go? Simon Goodwin explains how you can do it, without resorting to soldering if you don't want to.

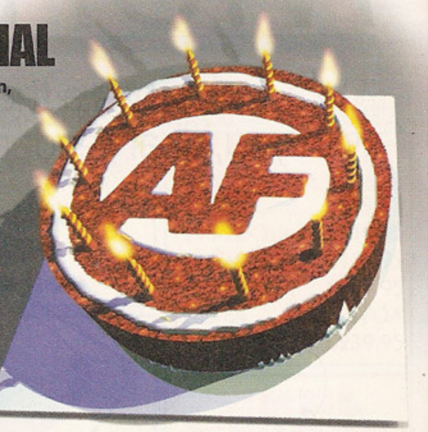
AMIGA FORMAT Contents

ISSUE 126 AUGUST 1999

NEWS

REGULARS

CREATIVE



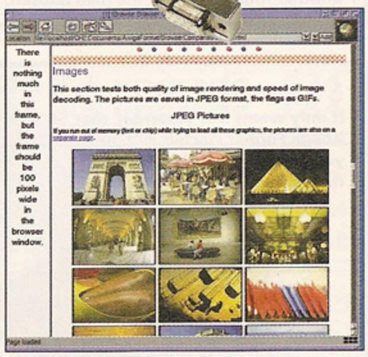


SERIOUSLY AMIGA



The Blizzard board – fastest and best?

A simple adaptor for PC rodents.



iBrowse gets tested in our head to head, and then we talk to the author.



The layers/frames menu has a whole host of new functions added to it.

COVER STORY

We've got all the design sketches for the next generation machines and, as **Jim Collas** explains to **Ben Vost**, you could have an actual next generation Amiga under your tree this Christmas...

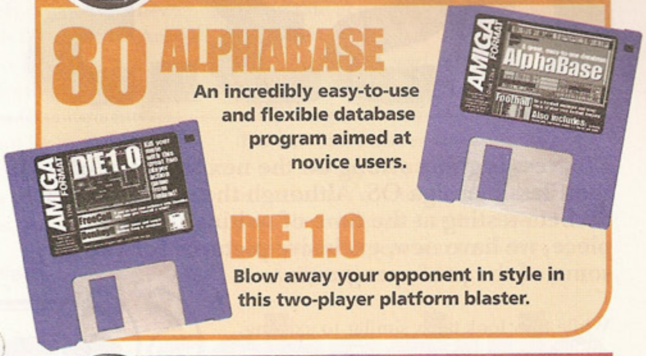
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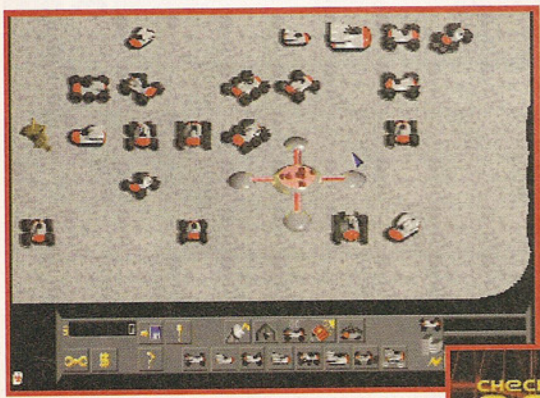
CD-ROMS



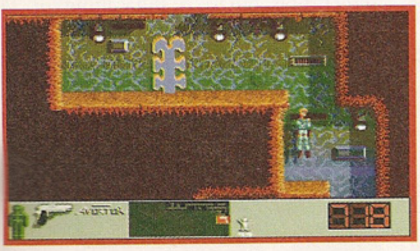
COVERDISKS



SCREENPLAY











Clockwise from top left: *Moonbases*, an average kind of game, news about *T-zerØ*, *Wasted Dreams* and *WipEout 2097*, and *Enemy* reviewed.



WHAT'S UP?

OS3.5 details revealed
All the latest information on the Classic Amiga OS revamp.

World of Amiga details
WoA organisers AmigaSoc reveal who and what will be at this year's show.

PageStream updates
Full details on versions 3.4 and 4.

WORLD NEWS

OS3.5 update

Progress is going strong on the next revision of the Classic Amiga OS. Although the new OS hasn't hit beta-testing at the time of writing this news piece, we have new, exclusive pictures for you of some of the prefs programs.

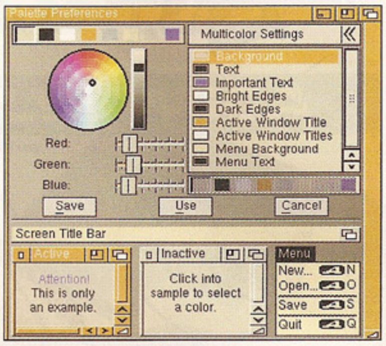
While they look fairly similar to existing prefs programs from Workbench 3.1, there are important differences, the most notable being the fact that all prefs programs now seem to be in resizable windows. In addition to this, there are cosmetic changes in the gradient-filled windows and new button and scrollbar gadgets, but more important are the hidden improvements, such as the *Locale* prefs program finally being able to handle half-hour time zones and the *Time & Date* prefs having the ability to set British Summer Time (daylight savings time).

Also, the *PrinterGFX* prefs program is gone since its functionality is now included in the main *Printer* prefs program, although the *Postscript* printer preferences is still there.

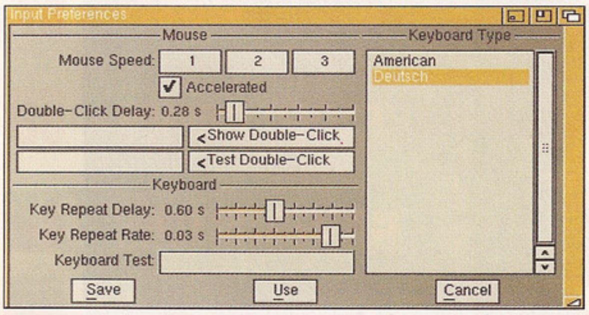
> "There are cosmetic changes in the gradient-filled windows and new button and scrollbar gadgets..."

The changes in OS3.5 will include the use of the renamed *ClassAct* GUI. Unfortunately, this is the reason behind the pop-up menu gadgets looking ugly, along with the positioning of the arrow in the *Input* preferences, and this really needs to be resolved before OS3.5 can be offered to a public which is used to the graphical niceties of *Magic User Interface* and other existing GUIs and graphical patches to Workbench.

Amiga Format hope that the new version of the OS will offer people enhanced functionality, as well as the cosmetic changes evident in these screenshots, but we're still waiting for our first beta...

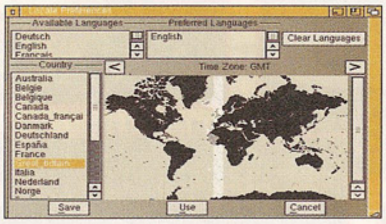


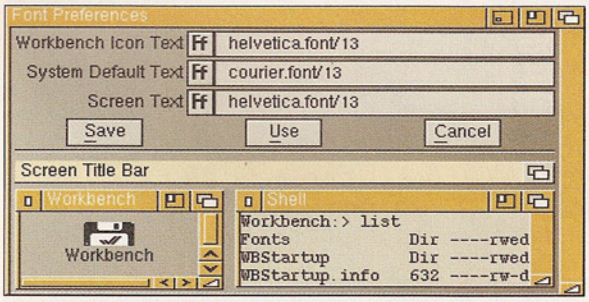
The new gadgets give the preferences program a 3D look.



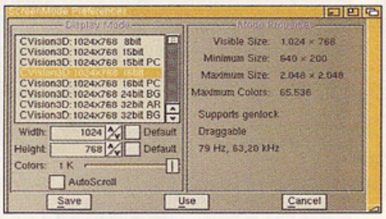


The *Printer* and *PrinterGFX* programs in one.

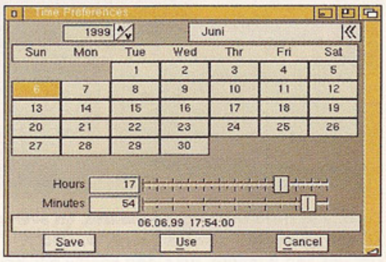




The new *Font* prefs has a useful preview window now, like the *Palette* prefs window has had since Workbench 2.1.

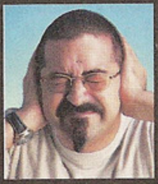


Notice the gradient in the window? Presumably this window is on a graphics card.



Talking heads

What have the Amiga Format staff been doing this month?



Ben Vost
Editor
The Matrix had me kickboxing my way out of the cinema in sunglasses, while *Hannibal* by Thomas Harris gave me a few nightmares about the eating habits of pigs...



Richard Drummond
Staff Writer
An odd month. On the plus side, I've at last found somewhere to live and so have moved out of that cardboard box behind the *AF* office. The downer was that I crashed my car. Oops!



Mark Wheatley
Prod. Editor
Summer is now well and truly here so I've been on the golf courses of Bath, causing other players to flee in terror as I wallop the ball in completely the wrong direction. Doh! I mean, fore!



Colin Nightingale
Art Editor
I've been really letting myself go this month, readers. Unkempt hair, forgetting to wash, drinking heavily and wandering around barking at the moon. Now where did I leave my medication?

Amiga in non-Amiga mags

Although Amiga have stated that they don't really want to fly above the radar and draw the attention of magazines other than Amiga titles, the number of spottings of Amiga-related news stories in the general media has increased dramatically.



Jim Collas, CEO of Amiga.

Recently, a *Guardian Online* interview raised a number of vital questions for Amiga owners wanting to know the truth about Amiga's intentions towards the platform. When Gateway owner Ted Waitt told the reporter that Amiga was "definitely not a computer business", the emails flooded into Amiga central in San Diego. However, a response was soon forthcoming from Jim Collas, who said that Gateway's interest in the Amiga may not lie in a traditional computing environment, but that Amiga itself certainly was a computing company, just not a traditional one.

Collas, who has frequently repeated the fact that he has declined interviews in top-rate general periodicals like *The Wall Street Journal* and *Time* in favour of the Amiga press, said: "This is a revolutionary architecture and computing environment for the future that combines power and simplicity."

In closing his statement, he said, "I will continue communicating as much as possible. I promise you that 1999 is going to be a great year for Amiga and the Amiga community."

G4 on schedule

Motorola have announced that production of the G4 processor is on schedule. G4 is the next generation range of PowerPC processors and was due, according to Motorola, in the "middle of 1999". Motorola's silence previous to this announcement has allowed rumours to circulate that the G4 would be delayed until the first quarter of 2000.

The first G4 chip, officially known as the PowerPC7400, will feature Motorola's AltiVec technology, an SIMD (Single Instruction Multiple Data) extension to the PowerPC instruction set. These extra instructions are executed by a separate 128-bit vector unit within the processor and permit the processing of streams of data in parallel. AltiVec is designed to give a performance boost to all manner of multimedia applications.

Delays in the production of G4 processors would be bad news for Apple, the largest user of PowerPC chips in desktop computers. Apple's current range of PowerMacs, based on the G3 processor, is in danger of falling behind the latest Pentium III PCs in speed, but the G4 will allow Apple to regain the lead once again. The Amiga community is also watching the G4 closely, since its release and use in forthcoming accelerators from phase 5 will mean the Amiga will have cutting-edge processor power for the first time in years.

Continued overleaf ➡

Fusion/PCx PPC pre-orders

MicroCode Solutions stirred up a hornets' nest of contradictory arguments that was definitely unexpected when they announced the long-awaited publication of PowerPC versions of their well-known *Fusion* Mac emulator and *PCx* PC emulator. The reason for the lack of cheering at the news, which might otherwise have been expected, was down to the fact that Jim Drew, boss of MicroCode Solutions, expects people to pre-order the software, and at a price many feel is unfair.

The pre-order price for either product is in the region of £100, rising to about £130 once it's finished, but it won't be unless MicroCode receive 500 pre-orders for each product. MicroCode have since modified their position, stating that anyone who pre-orders will receive *Fusion/PCx 68K* immediately, with the PowerPC version to follow, and if the number of pre-orders exceeds 1,000, the price will drop to just $129. According to MicroCode's Jim Drew, 1,000 pre-orders is only 10% of the current Amiga PowerPC market, with more people buying new PowerPC-based accelerators every day, adding to that total.

Blittersoft, MicroCode's distributors in the UK, declined to get involved with the pre-ordering scheme, preferring to stay clear of the controversy involved in taking money for a product that doesn't yet exist. However, they reminded us that the only money MicroCode have ever made from the Amiga was from sales of *Emplant, Fusion* and *PCx*, and they never charged for upgrades to these products, meaning they aren't exactly cash-rich developers.

DVD DEVELOPMENTS

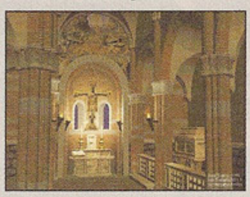
Sony have developed a new laser light oscillator which can read data from both DVDs and CDs. Until now, for a DVD drive to retain CD compatibility, two lasers were required. This is because each format needs a different wavelength of light for reading. The new oscillator will allow the cheaper production of DVD drives and, in particular, will halve the number of components in Sony's forthcoming PlayStation 2 games console. Sony have undergone criticism recently and this new development will help them keep to the projected £199 RRP for their next generation console.

Other DVD news includes reports that Hewlett Packard and Sony are to release a multiple rewrite DVD drive for the US market this autumn. This drive, known as DVD+RW, will be manufactured by both companies under their own brands and is planned to retail at under $700.

Tornado 3D gains UK distribution

Tornado 3D, the Italian challenger to *Lightwave*, is finally set to gain UK distribution through Blittersoft. The 3D package takes full advantage of powered-up Amigas, offering proper graphics card and PowerPC support. The software offers real-time shaded previews of your scenes, including support for the ViRGE chipset of the CV64/3D, the Permedia chipset of the PowerPC graphics cards and the forthcoming Voodoo-based 3D module of the Picasso IV. It also supports many high-end rendering functions such as volumetric lighting, NURBS and full kinematics with anchoring for character animation.

Tornado 3D will be available in two versions. The full version will cost £299.95, but amazingly there will be another version called *Tornado 3DSE* which will have nearly all the features of the full version, bar the most powerful, but at a cost of only £79.95.





While the SE has support for volumetric lighting, splines, lens flares, inverse kinematics and many other high-end features, it will lack support for the Permedia 2 chipset, fractal triangles, meshpainting and a few other bits.

Best of all, there's a very friendly upgrade path from the SE version to the full version, and from that to *Tornado 3D v3.0*, which is sure to please users. Both the SE and full packages should be available from Blittersoft by the time you read this, and you can find out more details from the *Tornado 3D* website at http://www.tornado3d.com or from Blittersoft on 01908 261466.

Just a pair of the fantastic images that users have created with *Tornado*.

The World of Amiga

We asked World of Amiga organisers AmigaSoc what they would have at the show this month, and this is what they had to say:

"Amiga are bringing their video wall (as seen in Cologne), so expect a plethora of seminars, "How To" sessions and product demonstrations. At the time of writing, we're still waiting for a few of the speakers to confirm the subject of their talks, but we can tell you that we have Amiga experts like:

- Dr. Farrukh Alavi (King's College, London, talking about hardware)
- Tim Corringham (RamJam Consultants, talking about *Java*, among other things)
- Michael Pelt (Great Effects Development, talking about *PFS*)
- Paul Nolan (Paul Nolan Ltd, talking about *Photogenics*)
- Kermit Woodall (Nova Design, talking about *ImageFX*)
- Andreas Kuessner (WK Artworks, talking about *Wildfire*)

Many of Amiga's top brass will also be in attendance, so you'll have the chance to meet up with Jim Collas, Petro Tyschtschenko, Rick LeFaivre and Tom Schmidt, among others.

Don't forget that you'll be able to register leading Amiga shareware on the spot without having to resort to the hassle of sending money abroad. Now there's no excuse not to register that program you use all the time!

User groups from all over the UK, and indeed Europe, will be out in force. By popular demand, Annex will also be making an appearance to provide some additional entertainment.

Gaming contests sponsored by leading Amiga games developer ClickBOOM will be taking place throughout the weekend. It's your chance to play all the latest games hot from the coding teams and clickBOOM will be offering prizes to those who achieve the highest scores.

Make sure you stop by the Amiga Cybercafe, sponsored by Wirenet, in association with Active Technologies. See how easy it is to get your Amiga online, and what you can do once you're connected. For those who already have Internet access, there may well be a few surprises in the form of new software to make your Amiga net surfing even more pleasurable than before."

The number for ticket ordering is 01369 708004 and more info can be found on http://www.worldofamiga.co.uk

100 Issues ago

AF26 September 1991

AMIGA FORMAT



We look at what was going on in the Amiga market 100 issues of *AF* ago…

- **Cover feature: Two-fold: an exclusive on *DPaint IV* and music for games.**

- **On the disks: One floppy with a demo of *DPaint IV*, a demo of *Magic Pockets* and bits to make a tune.**

- **News: New A500 bundle (Cartoon Classics) and some doubt over the quality of the bundled games; Channel 4 to launch *GamesMaster*; *Guinness Disk* (sic) *of Records* is launched; new ICD products – 20MB 2.5" internal IDE hard drive for the A500 and 52 or 105MB 3.5" drive (which replaces the floppy drive); Supra launch the world's fastest modem, which can achieve the incredible rates of, gasp, 38,400bps!**

- **Prices: That 20MB drive by ICD has a retail price of just £359 and we carried loads of ads for people just selling floppy disks – one ad offered 250 Sony DS/DD disks for £82.25.**

- **Games reviewed included: *Mega-lo-mania* (ImageWorks) 91%, *Jimmy White's Snooker* (Virgin) 91%, *Bart Simpson vs the Space Mutants* (Ocean) 82%, *Battle Chess II – Chinese Chess* (Interplay) 76%, *Thunderhawk* (Core Design) 90%.**

- **Serious products reviewed: *Amos Compiler* (Mandarin) 85%, *Amos 3D* (Mandarin) 82%, *Art Department Professional* (ASDG) 75%, GVP Impact II accelerator 95% (the model reviewed had a 33MHz 68030 and FPU and a SCSI controller for the A2000. The cost? A mere £1,495! The Impact II for the A500 was also included in the review), *VistaPro* (VRLI) 90%, *Technosound Turbo* (New Dimensions) 81%.**

- **Notes: Although we're now past the middle of 1991, the only machine yet to have OS2.04 is the A3000.**

- **Pages: 204**
- **Cost: £2.95**

THREE WEDDINGS AND NO FUNERALS

Love is very definitely in the air right now, with three weddings taking place recently. There was Mr. Paul Nolan, author of *Photogenics*, getting married on May 26th to his fiancée Ela, followed swiftly by our Assistant Publisher, Tim Tucker, married to Judy on May 29th. However, they were both beaten to it by our favourite Amiga music fan, Tony Horgan, who married his longtime girlfriend Jo on May 20th. Congratulations from us to all three couples!



Tony and Jo, up in a tree, K.I.S.S.I.N.G...

PageStream 4

As Softlogik themselves say on their website, *PageStream 3.4* will be the last minor update for *PageStream 3*. That really isn't a bad sign, and some of the more obscure bugs have now been fixed, as well as improvements made to the Amiga's only serious DTP package. Version 3.4 features include:



PageStream 3 gets an update and a new version is currently in the works.

- Improved Undo/Redo, fix in/out of page/spread/ pasteboard, undo remainder of object editing and undo delete page/chapter.
- Dynamically move articles to proper document/chapter level.
- Spell checking, with dictionaries for most languages supported.
- Colour palette for text.
- Drag out guides.
- Speed-up editing of text, especially long articles.
- Tick-based palette updates for faster execution of complex articles.
- Edit text hooks for extensions.
- Revamp styletags, including Styletag delete loop, Character/Paragraph combo and Styletag override.

There are many other improvements to this update, and best of all it's free.

The reason why it isn't bad news that this is Softlogik's last update to *PageStream 3* for the Amiga is because they're currently working hard on *PageStream 4*. The new version will incorporate things like HTML and PDF export, table of contents and index generation, a much improved find and replace that supports wildcards and special characters and lots more.

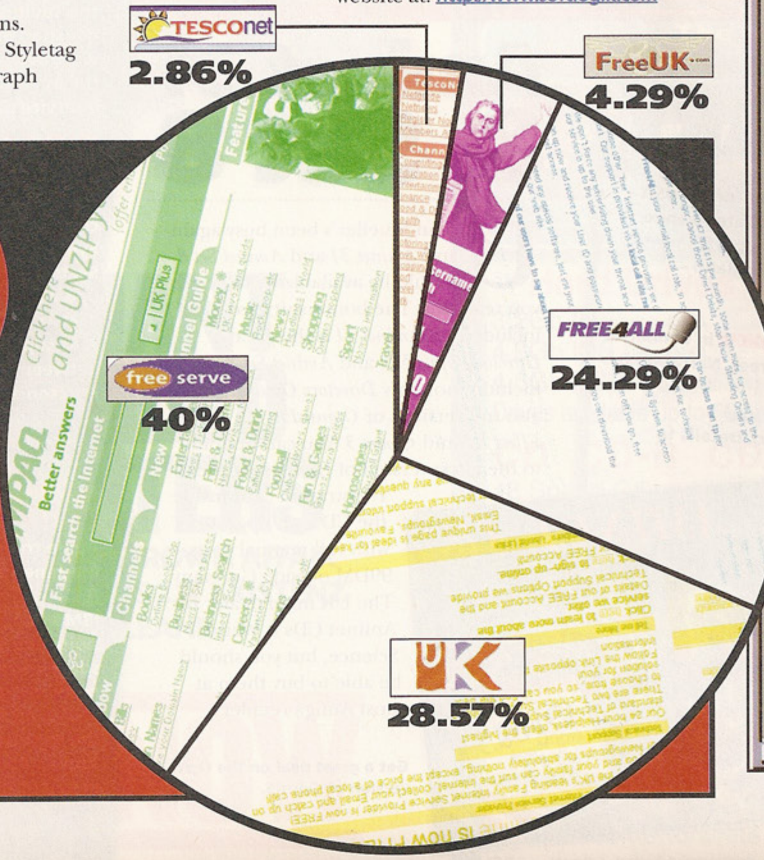
Softlogik hope to have this version ready for the end of August, and while they have a US distributor in the shape of Software Hut, there doesn't seem to be any UK representation, with the apparent demise of LH Publishing, the previous official distributor.

More information about what will be included in the next revision of *PageStream* can be found on Softlogik's website at: http://www.softlogik.com

VOX POP

afb members were asked which free ISP they favoured:

CATEGORIES:
- Tesco.net
- FreeUK
- Free4all
- UKOnline
- Freeserve



Vital Horgan

This Amiga business really is a very strange thing. Here we are, a bunch of "survivors" from the late '80s who once straddled the cutting edge of technology (ouch!) and rode it fearlessly into the future. Then someone switched the signs around and we found ourselves cantering up a side-road to obsolescence.

As the side-road degenerated into a dusty track, we realised that it was actually more fun to be out of the race, content to meander along, getting to know each other, occasionally stopping for sandwiches and sharing weak lemon drinks with one another.

We told ourselves we'd be fine, consoling each other in times of doubt that this dusty track was actually a secret short-cut that would lead us back to the front of the pack, and that we'd return stronger than ever before, armed with our unique experiences and insights gained along the detour. However, the track just went on and on and we began to get a little bored of the same old sandwich fillings, taunted by stories of the far more exotic fare available on the main drag.

Then came the self-proclaimed saviours, telling us that yes, we too would soon be sampling the delights of sausage and tomato flavoured crisps, fizzy drinks that taste cold even when they're warm and other technological innovations of the late '90s. But then, one after the other, they disappeared, so in the end we didn't bother to take much notice of that kind of cheap talk.

Despite all of this, we're still going to get together for the annual picnic, otherwise known as the World of Amiga, sit and listen to this year's saviour tell us how it's all going to be lovely very soon, and we'll do our very best to believe him. Again.

Tony Horgan

Continued overleaf ➡

AF Net Corner

FUNNY WEEKLY SITES:

Here are the sites we visit every week for new, not necessarily politically correct, laughs.

On Mondays: The Weekly http://www.theweekly.co.uk



Make sure your screen is wiiide enough...

The Weekly is a spoof newspaper written in part by Jonathan Nash, doyenne of *Amiga Power* as once was. It's excellent and inventive, although it expects the default width of your browser to be rather wide. The best part of recent weeks for me is undoubtedly the story about electricity being deified: "Electricity is the religion for the new millennium. What's more, unlike the vague, amorphous powers behind these other cults, you can invoke its presence by rubbing a balloon against your head."

On Wednesdays: The Onion http://www.theonion.com

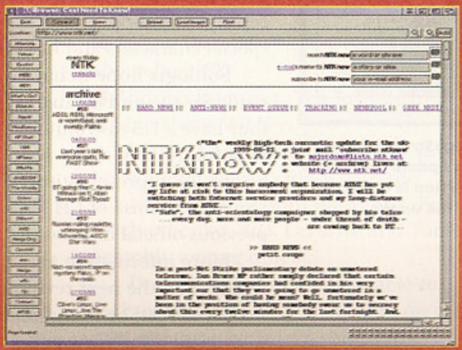


Good-looking and unafraid to lampoon the rich and (in)famous.

Another spoof newspaper, The Onion is proof that not all Americans have their irony gland surgically removed at birth. With regular sections and lead stories, The Onion is a mine of great material and is usually pretty topical. The best part of recent weeks for me was this week's info-graphic about Sony's Aibo cyberdog, which says: "15% say it's so popular because [it] won't bite faces off children unless specifically programmed to."

On Fridays: ntk http://www.ntk.net (you can also get it as an email)

ntk is the self-proclaimed "weekly high-tech sarcastic update for the uk" and mainly deals with computing info, but also takes in films and the like. Sarcastic is probably too kind a word for the sort of savaging that ntk can do to a technology or company, but it's all done in the best possible taste. The best part of recent weeks for me was the piece on all the pirate versions of *The Phantom Menace*: "Hey, if George Lucas doesn't want the world to pirate his Star Wars films, why's he keep putting that camcorder-calibrating eye test-chart at the beginning?"



Showing its roots as an email newsletter...

SHOW DIARY

JULY 23-25: AMIWEST '99 in Sacramento, California, USA – Holiday Inn, Sacramento, Northeast, 5321, Date Avenue, Sacramento, California, USA. http://www.sacc.org/amiwest/

JULY 24-25: WORLD OF AMIGA in London, England – Kensington Town Hall, London, England. http://www.worldofamiga.com

AUGUST 21-22: AMIGA DOWNUNDER '99 SHOW in Canberra – Australia Hotel Heritage, 203 Goyder Street, Narrabundah 2604, Canberra, Australia. http://www2.dynamite.com.au/krash/amigadu/

SEPTEMBER 4: SAKU '99 in Vantaa, Finland. Details to follow. http://batman.jytol.fi/~saku/

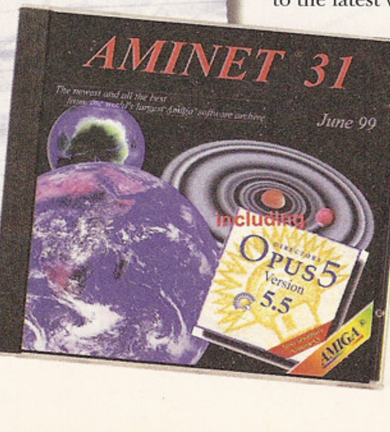
SEPTEMBER 24-26: INTERNATIONAL AMIGA '99 in Toronto, Canada. Details to follow. http://www.randomize.com

NOVEMBER 12-14 HOME ELECTRONICS WORLD '99 in Köln, Germany. Details to follow.

APRIL 2000: SWISS COMPUTER FUN 2000 in Switzerland. Details to follow.

Aminet 31 & Set 8

Urban Mueller's been busy again and *Aminet 31* and *Aminet Set 8* should be available by the time you read this. The bonus software included on *Aminet 31* is the great *Directory Opus 5.5*, and *Aminet Set 8* includes not only *Directory Opus 5.5* but also full versions of *CygnusEd 3.5*, *Art Effect 1.5* and *Gloom 3*. You can upgrade to the latest version of *Opus* using the registration card inside the CD – an upgrade with full manual costs 99DM outside Germany. The UK main dealer for Aminet CDs is Weird Science, but you should be able to buy them at most Amiga retailers.



Get a great deal on the first version of *Opus 5*.

Other news

NOT JUST A TOY

A report just released should silence all those who believe the Internet is merely a toy. The study, conducted by the University of Texas, found that the whole of the Internet industry in the US generated $300 billion in revenues in 1998. For comparison, the US auto industry totalled $350 billion, while energy managed only $225 billion in the same period.

LINUXPPC 5.0

LinuxPPC 5.0 was released on June 10th. *LinuxPPC*, produced by LinuxPPC Inc. is a port of RedHat's popular distribution of *Linux*, the free operating system, and will work on most PowerMacs and clones, CHRP and PReP motherboards and Amigas with a phase 5 PowerUp board. New features include simpler installation, the *GNOME* desktop and the *Enlightenment* window manager. More information is available from http://www.linuxppc.org/

WINDOWS98SE ON SALE

Windows98SE (Second Edition) went on sale at the beginning of June. It's an update to Microsoft's Windows98 release of last year and includes new support for sharing Internet connections, the latest version of *Internet Explorer* and numerous bug fixes. Within one week of release, however, an alert has been posted on Microsoft's website revealing a bug which can cause a machine running Win98SE to hang when suspended. While this fault is relatively benign, it raises the question of whether upgrading to SE is worthwhile. The bug fixes provided by the update are expected to be released as a service pack for existing Win98 users.

FIRST SYMBIAN DEVICE

The Psion 5mx will be the first commercially available machine to run Symbian's EPOC32 release 5 Operating System when released this week. This update to Psion Series 5 will features a 36MHz ARM processor, 18MB memory and *Java* support. Symbian is a partnership between British palmtop makers Psion, Ericcson and Nokia. Visit the website at http://www.symbian.com/ for more details.

APPLE TO GET SOI CHIPS

Apple could be the first company to ship machines with processors using SOI (Silicon on Insulator) technology. SOI is IBM's new process which increases a chip's switching speed, giving a claimed 30% speed increase over conventional methods. IBM could deliver a PowerPC 750 using SOI and copper interconnect in the next two months. This would give Apple's PowerMacs a performance boost in lieu of the forthcoming G4 range.

New

You may have seen the Kyoto images on the web, but Ben Vost invites you to have a look at the rest of the designs for the new Amiga.

Amiga really seem to be hotting up their information policies. Not only do we have revealing details from the first monthly press conference with them to share with you, but also these nifty designs for you to drool over. They were all done by Pentagram (http://www.pentagram.com), industrial designers and architects to many major companies, and they were given a fairly free hand by Amiga.

Don't try looking for these pictures on the web instead of buying this mag – they're not available anywhere else and we're the first magazine to have them. Amiga's stance is to provide us with more news before it's available online, so be sure to stick with *AF* as we bring you all the news about the new Amigas as it happens. Now read on…

When do you plan to give details about the new hardware?

No later than AmiWest and WoA. We expect to be able to give a lot of details about the hardware at those shows. No later than the end of July for sure.

When can we expect the first pictures of the new OE?

At the same time – AmiWest and WoA.

> "We want to get two or three very large software houses to port some of their most popular games and apps…"

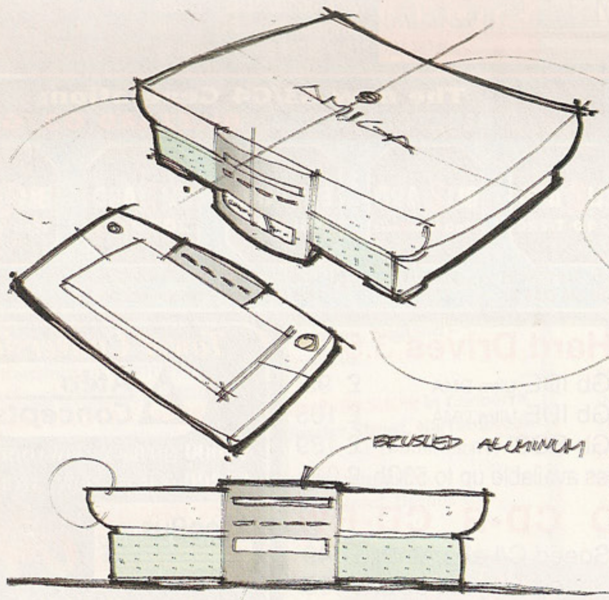
We hope to have models of some of the machines, screenshots of the environment and details of the hardware.

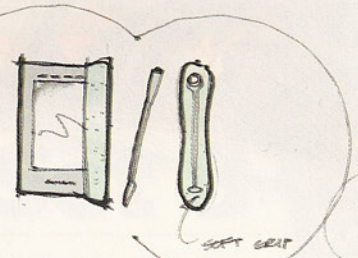
When will advertising start?

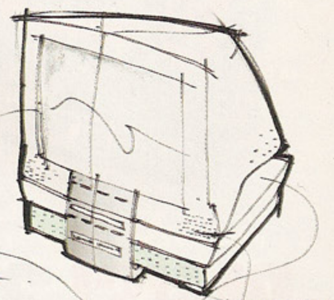
While we will obviously be advertising the next generation Amiga, we do not have a marketing plan sorted right now, so we don't have details of when and where they will appear. Obviously they'll start when we ship the next generation, but where they will appear… we have not finalised any plans.

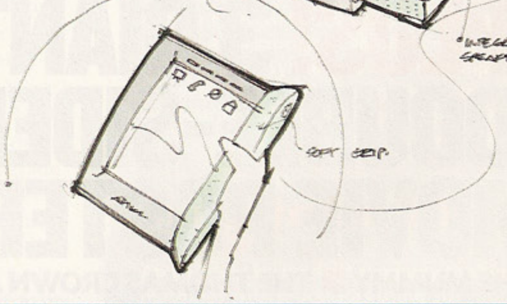
What and who is the target market for the AmigaNG?

In the emails I've received there has been a lot of talk about what the next









'Kyoto'

You may have already seen these pictures. Although the case looks more like Compaq's ill-conceived PCTV from back in 1995 than an iMac, Amiga insist that it's nothing like either since the monitor is completely separate from the base unit.

ABOUT THE DESIGN SKETCHES – JIM COLLAS

People didn't like the idea that it was going to be like an iMac. One thing's for sure, though – it will not be like an iMac.

The monitor is a separate piece on the base of our convergence unit and will allow the user to select any monitor they want, although we will offer an optimised 15" monitor which fits in with the style.

The unit will be very expandable. It will have things like USB and a DVD driver, optional firewire, the ability to house two hard drives and an extra 3.5" bay for things like a Zip or an LS120, as well as several expansion slots. We expect it to be a fairly powerful and flexible machine which will be the connecting convergence step between computing as we know it and the next generation home computing environment.

generation Amiga should look like, how much back compatibility there should be and so on. The difficulty is that we need to define a single plan. The NG computer is somewhat targeted towards the Amiga enthusiast and, we hope, people who want a new, exciting type of computing environment and who are less than thrilled with the PC or Mac right now. At the same time, we do have to link this to the future. We can't just come out with the next generation PC, a competing platform to the existing PC and Apple markets, and say, "Hey, here we go. Now you can choose between Wintel, Apple and Amiga."

That's a very difficult thing to do, to have an independent platform that's successful in the current marketplace. What we have to figure out is what is revolutionary in the computer market. What's the next revolution going to be? I don't believe it's just going to be a better PC platform, something that has better graphics and a faster processor.

It's really going to be something that integrates the information/ communication revolution that's occurring into a consistent computing environment for the home, which includes powerful multimedia computers as well as information appliances. The Amiga Operating Environment is meant to appeal to the hundreds of millions of people who are or will be using these information appliances in the house as much as to the computing enthusiast who will be developing new software and hardware using it. It's kind of a long answer to the question, but there are no short answers to this one!

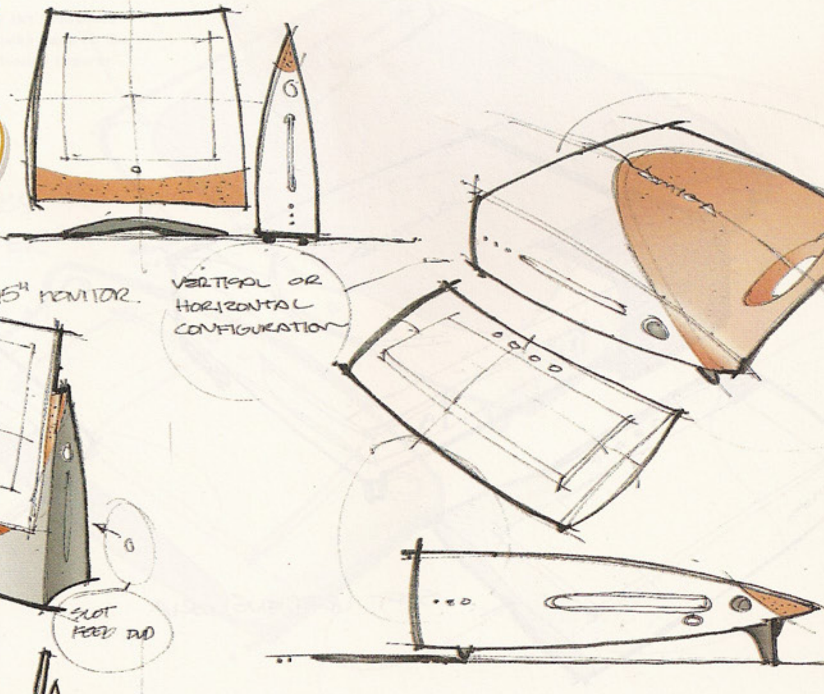
What are Gateway going to be doing with the Amiga?

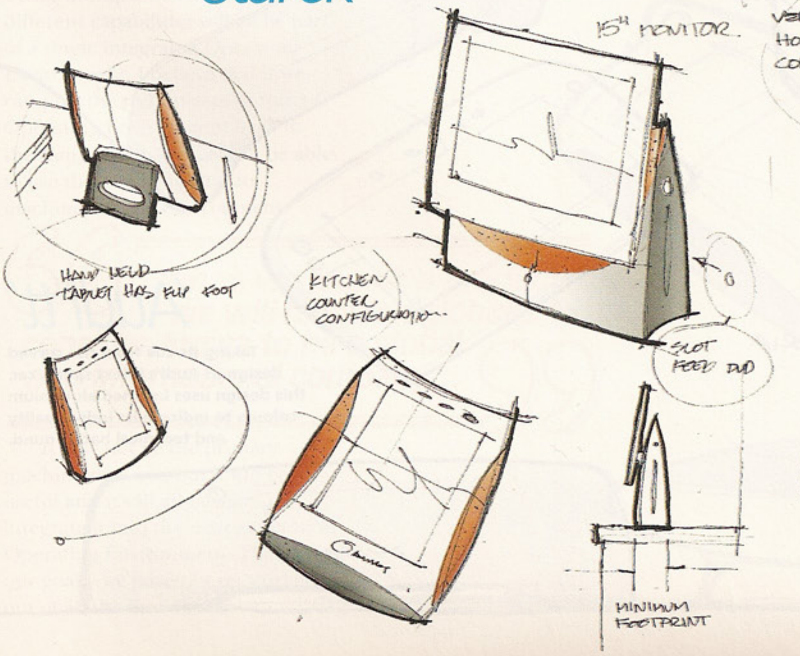
My expectation is that Gateway will pick up a few variations of the Amiga. I want to be careful about this because these are only expectations – they aren't Gateway's firm plans. Obviously, we do have strong ties with Gateway, they're very interested in the new environment and I expect they will pick up some of the Amiga or Amiga-compatible devices, maybe even manufacture some that they can distribute themselves.

Will third party software be available for the NG when it ships?

> **The NG computer is targeted towards people who want a new, exciting type of computing environment...**

'Starck'





Inspired by designer Phillipe Starck, this design makes use of his slim, curved lines. It's interesting to see that it's designed to be used on its end or side, but I'm not overly enamoured of the brown colour...

Continued overleaf ➡

It is our goal to have third party software. I expect that we will accomplish that through two routes. One route is that we are going to come up with an Amiga developer program for the current Amiga developers. We are going to provide several incentives, which may include monetary incentives, to get them to develop for the next generation Amiga.

We also want to get two or three very large software houses to port some of their most popular games and apps to the new environment.

Are we on schedule to be able to purchase an Amiga NG for under the Christmas tree this year?

That is our target. It is an aggressive schedule, and we'll be able to release more information on it soon, but I'm still optimistic.

The logistics of getting a new machine out for Christmas are a bit tight, especially as people start delivering Christmas crackers, diaries and so on at about the start of July. How do you hope to achieve your fourth quarter target if you haven't already got the machine ready?

It really depends on volume too. When you look at ramp cycles relative to products, they are very dependent on what volumes of products you're talking about. In the PC industry, to get a machine out for Christmas you'd probably want to start ramping up production in around the September timeframe. That's talking about hundreds of thousands of units.

I believe that the initial production run for this product will be closer to five to 10 thousand units, going rapidly into the tens of thousands of units Q1 next year and hundreds of thousands of units Q2/Q3. This is a very fast ramp cycle. We're talking mid-October and still being able to get these machines out on target.

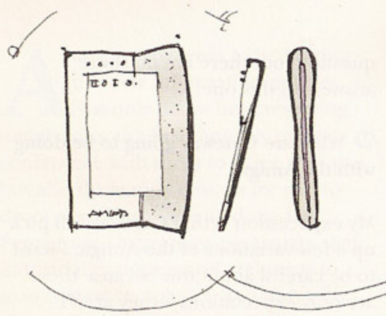
I believe that the new machine is for the Amiga community for the first batch. I'm focused on giving something back to the community, stopping the attrition and getting them excited again.

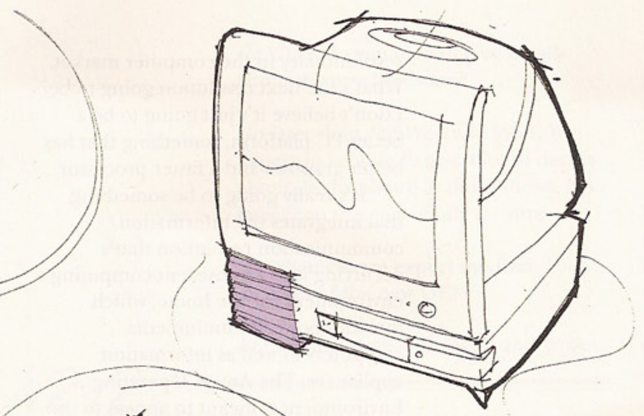
What about the global market? Is the new Amiga in Q4 only going to be aimed at America?

My plan is that when we launch a product we will launch it globally. I consider Amiga to be a global and international company and I think launching only in one country doesn't send the right message.

What sort of staffing levels does Amiga have?

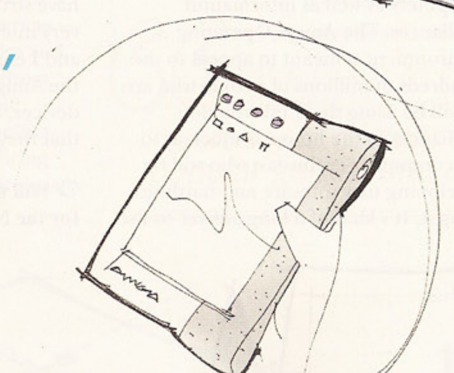
I don't want our competitors to know exactly what we're up to or what the size

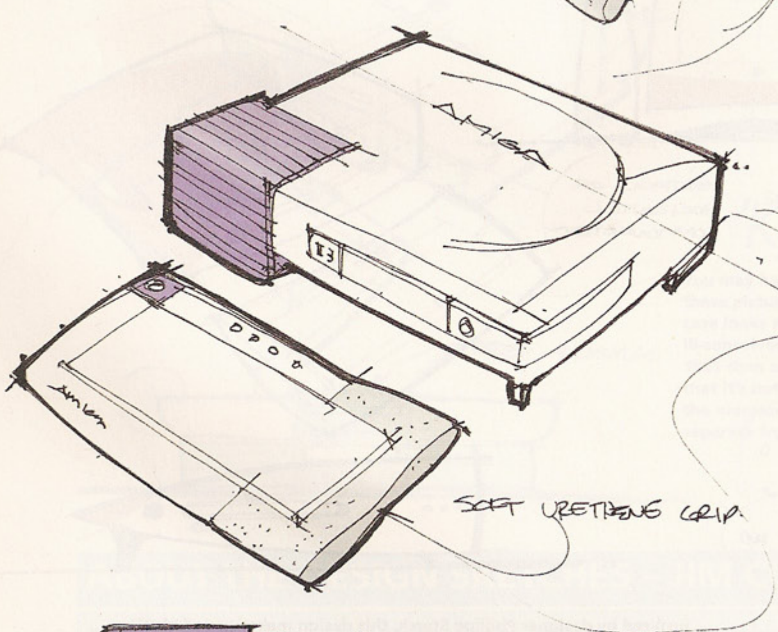


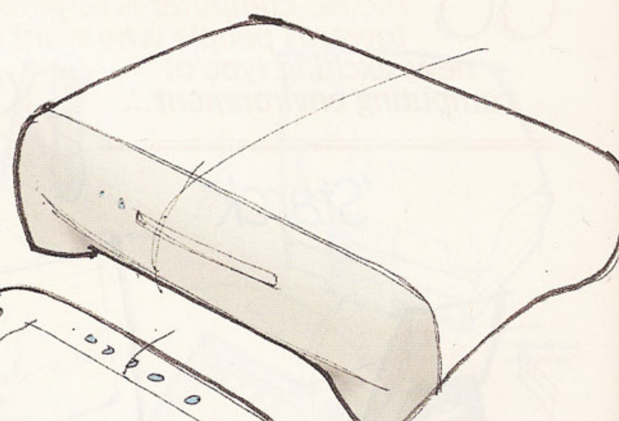


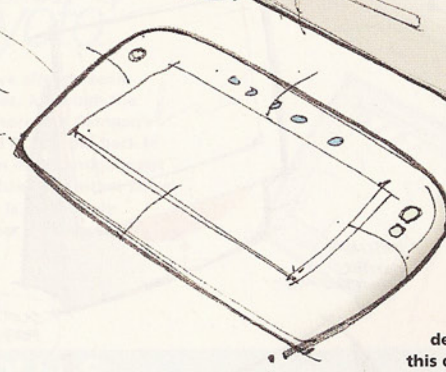
'Techtonica'

Techtonica is obviously a development of Kyoto. The handheld bit is a separate unit and is designed to be used either way up to suit both left- and right-handed people.



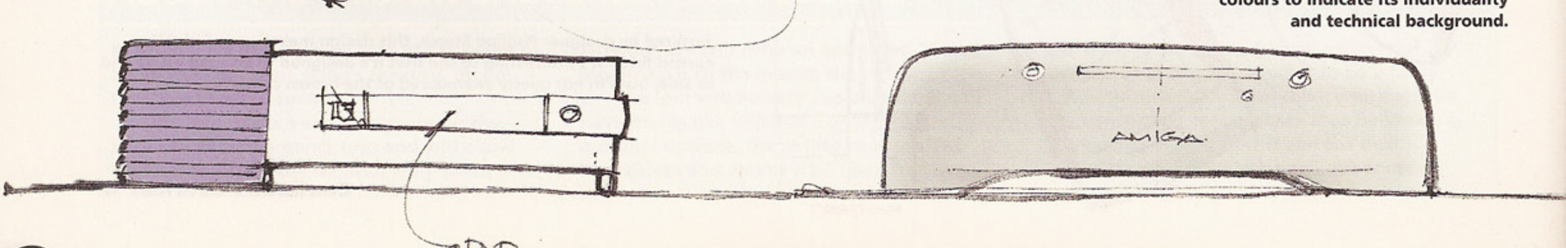






'Audi tt'

Taking its cue from the curved design of Audi's latest sports car, this design uses brushed aluminium colours to indicate its individuality and technical background.



OPERATING ENVIRONMENT

In both my letters to the community and the description of these sketches, we talk about a home network computing environment which integrates not just powerful computers but also the information appliances. This brings them together into a single computing environment that allows ease of use and access to information functions and capabilities throughout the network. That's the reason why we call what we're doing an Operating Environment, because it encompasses the whole environment of all the devices and how they interact together. The user interfaces and very powerful software structures of AmigaSoft keep all this together through the Internet or broadband network.

of our workforce is and how aggressively we are moving. In about two months (this conversation was held on May 26th) we'll probably be in a much better position to discuss that.

Finally, can you tell us any more about the bridge from the Classic to the new machine?

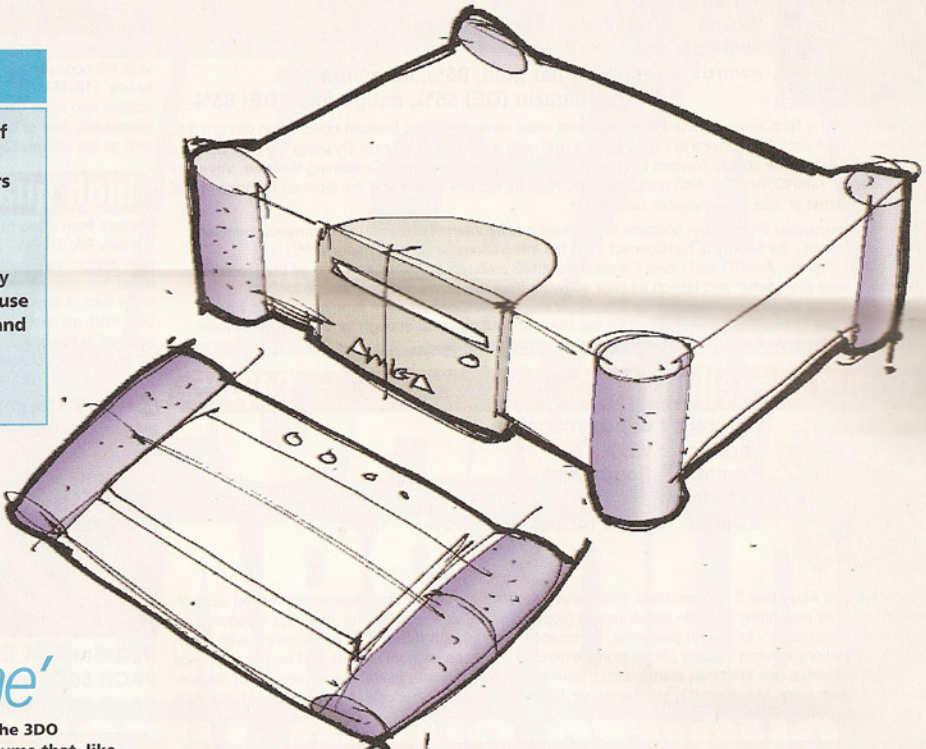
Our goal relative to the Classic is to come out with OS3.5, and we do want to come out with a recommended configuration that people can buy with a G3 accelerator card, the right amount of memory and the right video solution to run OS3.5 at its best.

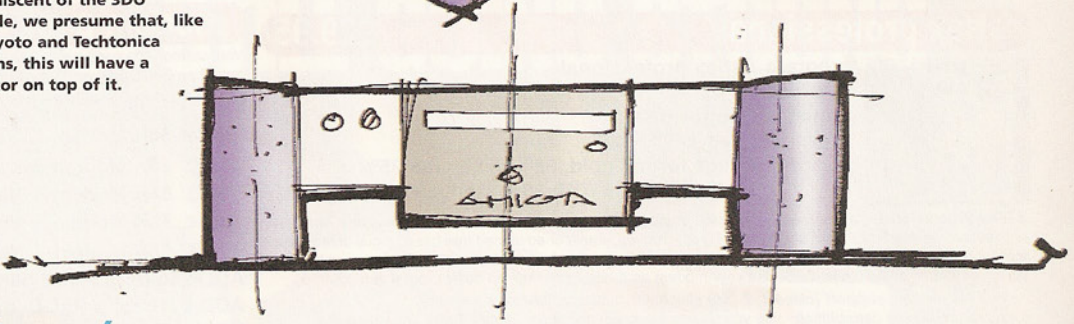
We're working on bridging the gap between the current Classic and the next generation Operating Environment by porting the NG Operating Environment back to an OS3.5-recommended machine so that people will be able to make use of their current investment in the Classic Amiga with the next generation technology.

The first question people are going to ask is how they can use any kind of current machine with this future software which is targeted at amazing new hardware. The thing to keep in mind is that I talk a lot about this Operating Environment where multiple machines with different capabilities will all be part of a single integrated Operating Environment. I believe that if we can port the right pieces of this NG Operating Environment back to the Amiga, Classic users will be able to use their existing Classic machines in that environment.

> *When we launch a product, we will launch it globally. I consider Amiga to be a global and international company...*

It may not be the primary machine they use, but it will be useful and it will allow them to integrate it into the next generation Operating Environment. That is our goal – we have not yet worked out of all the fine details.



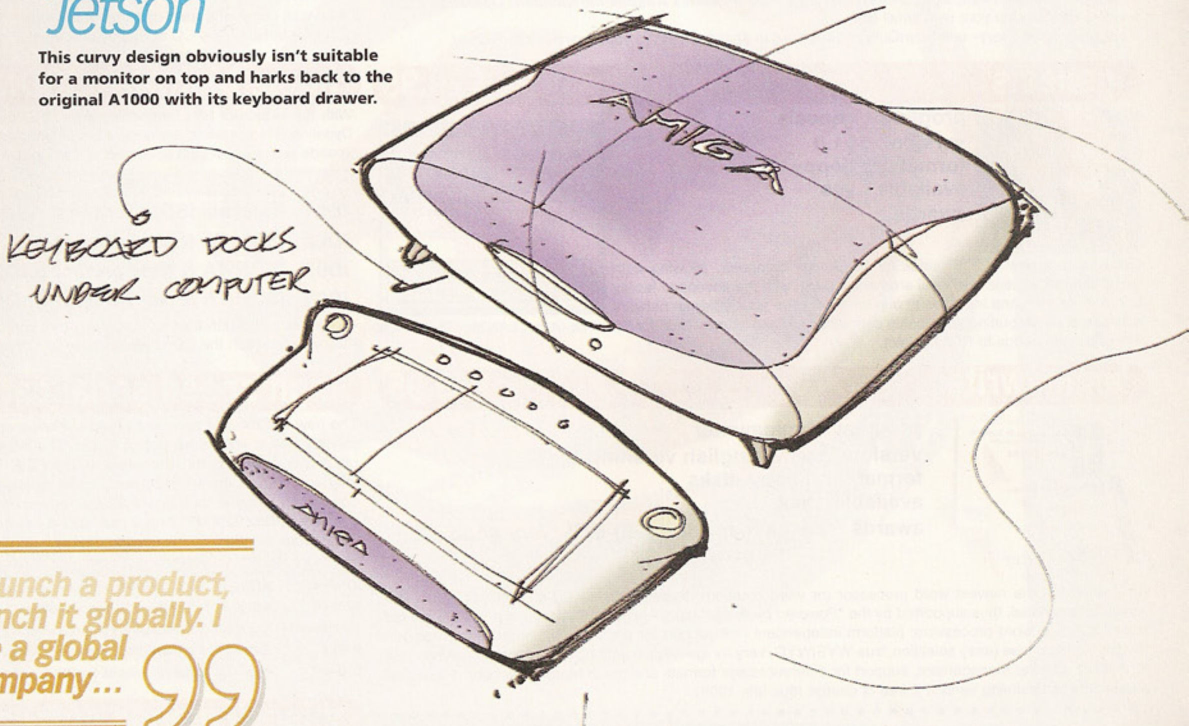


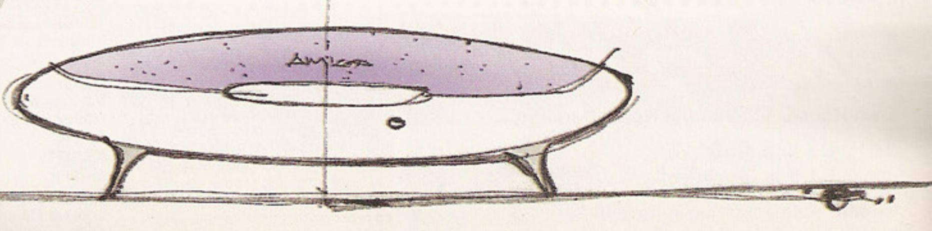
'Frame'

Reminiscent of the 3DO console, we presume that, like the Kyoto and Techtonica designs, this will have a monitor on top of it.

'Jetson'

This curvy design obviously isn't suitable for a monitor on top and harks back to the original A1000 with its keyboard drawer.





netconnect £49.95



program : netconnect
version : v2.3
format : cd-rom or floppy disks
available : yes
awards : amiga format gold, 96%, cu amiga 94%
amiga magazin (DE) 85%, amiga plus (DE) 85%

The award-winning **NetConnect v2** is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. By using the new Genesis Wizard, a user should be able to connect to the Internet in a matter of minutes. Containing Genesis, Voyager-NG, Microdot-II, AmIRC, AmFTP, AmTelnet, AmTerm, NetInfo, AmTalk, X-Arc and the Contact Manager. Ideal for both an Internet or local area network connection.

- *Eleven Commercial Programs* - contains the highest quality Internet software, all commercial versions.
- *Truly Integrated* - the beauty of NetConnect v2 is the integration. Contact Manager works with Microdot-II, Voyager, AmIRC and more. Centralised MIME preferences works between all the programs.
- *Flexible Dock Bar* - setup and launch all your software from this advanced and flexible tool bar
- *Aimed Towards Beginners Through to Advanced Users* - NetConnect v2 is simple enough for the beginner to use to connect to the Internet for the first time, but powerful enough for the advanced user who may require a dialup connection and local area network (LAN).

dopus magellan II new £49.95



program : dopus magellan II
version : v5.8
format : floppy disks
available : yes
awards : amiga format gold, 95%

Directory Opus Magellan II is a complete Workbench replacement and/or file management based system. Magellan-II offers everything from file management (copy, rename, view, extract etc), dock bar creation (create your own dock bars - to launch programs, commands, scripts), advanced FTP functionality (with asynchronous operation), custom themes (24 bit icons, different backdrops, custom sounds and scripts, improved user and start menus (ala Windows start menus), greater lister functionality (with full drag and drop), custom menus and much more. Magellan-II is indispensable. Once installed and used, you will never want to go back to your 'original' Workbench ever again.

stfax professional £29.95



program : stfax professional
version : v3.7
format : floppy disks
available : yes
awards : amiga format gold, 95%, cu amiga 95%
amiga magazin (DE) 89%, Amiga Plus (DE) 96%

STFax Professional is a commercial fax/voice message program which enables you to use your Amiga as a digital answermachine. Send and receive faxes, create a simple or advanced tree based digital answer system for family members, create a fax on demand service, log numbers via caller-ID, call screen or blacklist phone numbers, setup a mini-BBS, use your modem as a telephone, control other programs etc.

- *Full fax modem support (class 1, 2, 2.0)* - fax from your favourite Amiga software
- *Advanced voice capabilities* - use your Amiga as an advanced (or simple) digital answermachine
- *Support for the PACE Solo, 3-Com Message Plus or Kortex Adaptix Independent Operation mode*
- *Mini-BBS* - setup your own small BBS
- *ScanQuix support* - use ScanQuix to directly scan documents from your scanner into STFax!

genesis £29.95



program : genesis
version : v1.0
format : floppy disks
available : yes
awards



Genesis is a new TCP/IP stack for the Amiga computer, allowing both dialup Internet access and local area networking, with the advanced facility to run more than one interface at one time (ie. keep your ethernet network connected, whilst putting your dialup connection on and offline - ideal for Siamese users, LAN'ing one or more Amiga's or an Amiga to PC/Unix/etc).

amigawriter £49.95



program : amigawriter
version : v1.2 (english version)
format : floppy disks
available : yes
awards : amiga magazine (DE) 87% 'very good'.

AmigaWriter is the newest word processor (or word creating) package for the Amiga. Officially ratified by Amiga International, thus supported by the *"Powered by Amiga"* logo, AmigaWriter contains some unique features for Amiga word processors: platform independent (full support for commercial, shareware or freeware plugins), ease of use (easy selection, true WYSIWYG, very Amiga-alike in action), full paragraph control, page formatting, chapter management, support for different image formats and much more. All version 1 users will receive the forthcoming version 2 free of charge (due late 1999).

ACTIVE

Oval House, 113 Victoria Road, Darlington, DL1 5JH
Tel : 01325 460116
Fax: 01325 460117
E-Mail: sales@active-net.co.uk
http://www.active-net.co.uk

VISA DELTA EUROCARD MasterCard SWITCH

Delivery Information

S'Ware	- £1.00 for UK delivery - £3.50 for EU (recorded) - £4.00 ROW (recorded)
H'Ware	- £6 for UK next day delivery (serial cards charged at £3 for recorded delivery)

Make cheques/P.O.'s payable to <u>Active Technologies</u> and send to the address listed opposite. Credit/debit card payment accepted. For any additional information contact us.

free unlimited internet access new

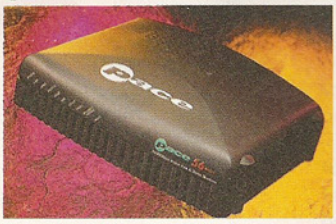
There has never been a better time to connect to the Internet - now it is completely free of charge! That's right: no connection fee, no on going service charge (except for your phone bill) and absolutely no hidden costs. We now provide details on how to connect your Amiga to the top three free-of-charge Internet service providers. These provide full connectivity: analogue and digital (ISDN) dialup, free web space (10-15MB), unlimited email addresses, full newsgroup access and more. Buy software or a modem pack from us and get connected, free of charge, immediately. All our packs are supplied with all the information you need to connect to the Internet.

FREE4ALL
FREEOnline.net
free serve

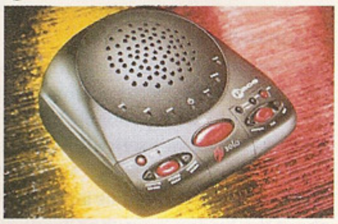
high quality modems from.. £69.95

Choose from three high-quality **<u>branded</u>** modems - the top of the range, award winning PACE 56K, the new PACE 'Solo' 56K or the middle of the range Dynalink 'MagicXpress' modem (well built, compact design, same colour as your Amiga). All ship with a five year warranty. The PACE modem's additional features include free lifetime technical support, UK caller ID (only modem available which supports this), a superb speakerphone and volume slider/control. All PACE and Dynalink 'MagicXpress' 56K modems are now v90 shipping ready - the agreed standard for 56K connectivity. Why not treat yourself to the brand new PACE 'Solo'? The 'Solo' can be used standalone from your Amiga. Want to go on holiday but need to receive fax and voice messages, but don't want to leave your Amiga running? The 'Solo' is the answer.

pace External 56K Modem



pace 'Solo' 56K Modem



Dynalink 56K External Voice/Fax/Data Modem	£69.95
PACE 56K External Voice/Fax/Data Modem	£119.95
PACE 'Solo' 56K External Voice/Fax/Data Modem	£189.95

modem pack options from.. £79.95

Various money saving packs are available. These are all based on the Dynalink v90 modem. Packs based on PACE 56K or PACE 'Solo' 56K modems available as an additional cost option.

Code	Pack Contents	£ Prices
PK01	56K Modem & STFax Professional	£ 79.95
PK02	56K Modem & NetConnect	£ 94.95
PK03	56K Modem & NetConnect & STFax Professional	£105.95
PK04	56K Modem & NetConnect, IOBlix-S, STFax Pro	£129.95
PK05	56K Modem & NetConnect, IOBlix IO, STFax Pro	£169.95

ADD £40 for a PACE 56K Modem (instead of the Dynalink 56K)
ADD £110 for a PACE 'Solo' 56K Modem (instead of the Dynalink 56K)
DEDUCT £30 for a Hypercom 3+ card (instead of the IOBlix IO card)

- All packs come with **free**, unlimited Internet connection - three options available
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

home highway - ISDN from.. £89.95

With the launch of BT's 'Home Highway', ISDN is now affordable for the home user. Our branded Dynalink 'MagicXpress' terminal adaptor enables you to connect to the Internet at blazingly fast speeds (you need a high speed serial card to use ISDN). Various ISDN packs are available:

Code	Pack Contents	£ Prices
ID01	External ISDN Terminal Adaptor (TA)	£ 89.95
ID02	ISDN TA & NetConnect	£114.95
ID03	ISDN TA & NetConnect & IOBlix-S	£149.95
ID04	ISDN TA & NetConnect & IOBlix IO zorro card	£179.95

- All packs come with **free**, unlimited Internet connection - one option available
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

high speed serial cards from.. £39.95

The new ***IOBlix*** card offers 4 high speed serial ports and 1 (2nd port option) high speed EPP/ECP parallel port to your zorro based Amiga. The parallel port offers both uni and bi-directional modes, offering compatibility for all printers. Parallel ZIP™ driver included. The ***IOBlix*** also has a modular interface. Two modules are currently being developed: an AHI-compatible sound card and a SANA-II compatible ethernet card (the ***IOBlix-E***, due soon). The ***IOBlix A1200-S*** offers 1 high speed serial port, the ***IOBlix 1200-P*** offers 1 high speed parallel port. Both designed for A1200 towers. The new ***Hypercom 3+*** offers 2 high speed serial ports and 1 high speed uni/bi directional parallel port.

Model	Machine	Specifications	Price
IOBlix-S	A1200-T	1 x 460,800bps highspeed buffered serial port	£39.95
IOBlix-P	A1200-T	1 x uni/bi 500k bytes/sec parallel port	£39.95
Hypercom3+	Zorro-2/3	2 x 460,800bps highspeed buffered serial ports, 1 x uni/bi 500K parallel port	£69.95
IOBlix	Zorro-2/3	4 x 460,800bps highspeed buffered serial ports, 1 x uni/bi 500k parallel port	£89.95
IOBlix-E	Zorro-2/3	Ethernet module for IOBlix zorro IO card	£ call

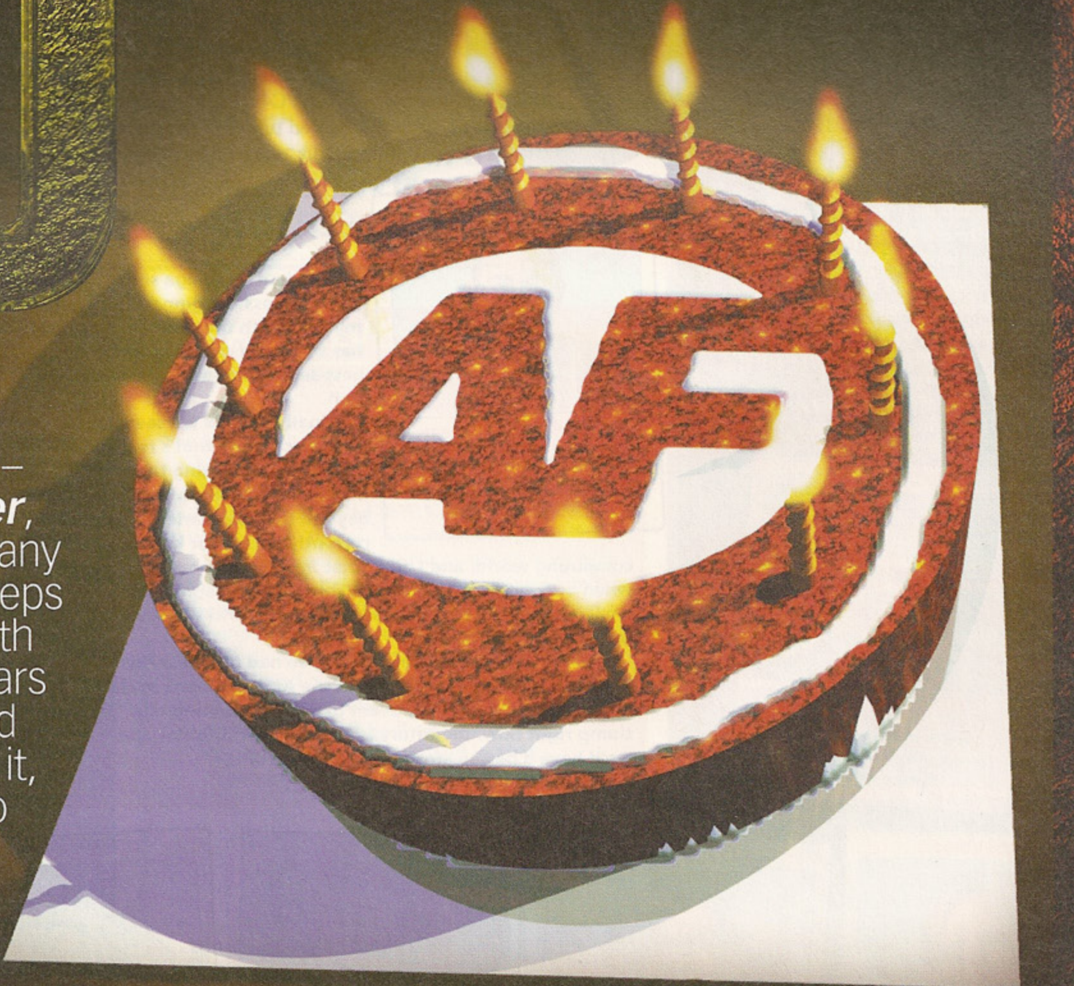
miscellaneous software

Various other individual software titles are available. These titles may be interesting to those not wanting to purchase NetConnect v2.

	By Disk	By EMail
Scalos - workbench replacer with advanced features	£20.00	£18.00
Voyager Next Generation	£22.00	£20.00
Microdot-II v1.1 (release) - email and news client	£22.00	£20.00
AmIRC	£22.00	£20.00
AmFTP	£20.00	£18.00
AmTalk	£17.00	£15.00
X-Arc - system archive management tool (handles lha, lzx and zip archives)	£17.00	£15.00
Contact Manager - system addressbook, works with many net/comms programs	£12.00	£10.00
AmTelnet + AmTerm Package Deal	£20.00	£18.00

- *5% Discount when 2-4 Vapor products are bought, 10% Discount for 5+*

AMIGA FORMAT 10 YEARS OLD & STILL GOING STRONG



While other mags come and go at Future Publishing – ***ACE***, ***Sega Power***, ***PCW Plus*** and many more – ***AF*** just keeps going from strength to strength. 10 years old this month and loads of life left in it, we feel it's time to have a party!

Continued overleaf ➡

MD FUTURE NETWORK

***Amiga Format* has always been a weird, lovable kind of fish. From its earliest days it delighted readers, baffled rivals and frustrated anyone's attempts to impose formal discipline on it in equal measures.**

Y'see, just as the Amiga set the agenda back in the late '80s, so *Amiga Format* rose to the challenge of being the creative, challenging, innovative echo of Commodore's then wundermachine. It refused to suffer from the keyhole perspective of treating the Amiga as just a great games machine which was then, apparently, its destiny. Instead, it established a blueprint, followed to this day, of treating the Amiga as a flexible, powerful agent of creativity that demanded an immersive commitment from its owners.

Just look at some of those early covers: this was no ordinary computer magazine, but some wild explosion of publishing risk-taking that was rewarded by the extraordinary loyalty of thousands of readers. Happy 10th birthday, you old bugger...

Greg Ingham



Publisher AF1 – AF51

Greg is now the managing director of the whole of the Future Network

Bob Wade



Editor AF1 – AF19

Bob was launch editor of *AF* and now runs software company Binary Asylum

Maff Evans



Staff Writer AF6 – AF37

Maff was the music expert on *Amiga Format* and enjoyed a game or two as well

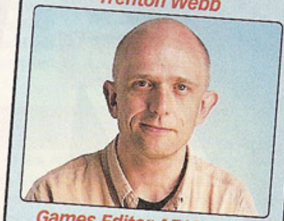
Neil Jackson



Games Editor AF32-AF44

He still thinks he's pretty good at *SWOS*, but now helps create games with Bob

Trenton Webb



Games Editor AF12-AF31

The ever polite Trent now also works for Binary Asylum. Is there a pattern here?

Way back in issue 72, Nick Veitch celebrated 10 years of the Amiga with a feature looking back at the platform's early years, and two years ago we celebrated *AF*'s 100th issue. Now we're celebrating our 10th birthday (can you believe it?) and things are definitely looking up.

Back in *AF72*, Escom's bid of $10m had just been accepted by Commodore's liquidators for the assets and name of the bankrupt company, and it looked like we were into a new era for the Amiga. Bernard van Tienen (remember him?), the man in charge of the Amiga for Escom, made several promises to do with expanding the Amiga line, including introducing a range of PowerPC-based Amigas. It never happened under their auspices, but now, finally, more and more people are actually equipping their Amigas with the hybrid accelerator card that took phase 5 two years to develop.

Amiga have promised that PowerPC-equipped Amigas won't be left behind in the rush towards the NG machine, with a porting of the new Operating Environment back to those machines. New applications are also surfacing which will bring mass popularity to the PowerPC on the Amiga, including Eyelight's *Tornado 3D*, available in this country for the first time on a consistent basis, and MicroCode Solutions' *Fusion* Mac emulator and *PCx* PC emulator, allowing high-speed emulation of the computing world's leading machines.

More than four years on from the Amiga's 10th birthday, we're still waiting for new Amigas to use, BoXeR's development seems to be taking an eternity and the Amiga market is full of users who've taken their A1200s to the extremes of Zorro III capability.

More importantly, with A4000 prices dropping through the floor for secondhand machines, more and more people are able to buy standard Zorro peripherals for their computers as they await the launch of the AmigaNG which Amiga have promised will be available at the end of this year.

Also coming from Amiga this year is a new version of the OS for the current range of Amigas. Given the version number 3.5, this new release is intended to relieve some of the hacking and patching that sometimes causes Amigas to not behave as well as they might. Although third party programs like *Scalos* and, more importantly, *Directory Opus*, have made a huge impact on Amiga owners wanting a faster, more useful system, there are still thousands

Ben Vost



Editor AF122 – present

Joined Future in 1996 after editing *Amiga Computing* magazine for a year

EDITOR

Having had an Amiga since 1987, I guess the pinnacle of my time with the machine just has to be editing the world's best-selling magazine devoted to it.

Finally in 1999 we seem to have a company that's really interested in pushing the machine we all know and love beyond the boundaries of what currently passes for the computing world, and I hope that in 10 years from now, when we're celebrating Amiga Format's 20th anniversary, we'll be doing so from a position as the world's best-selling computing magazine.

Looking back at old issues, as I've had to do for this feature, I've seen the changes in the Amiga market in close-up and although we may seem to be in something of a slump right now, the future is looking ever brighter and we'll have a better, stronger magazine for it.

Here's to the future!

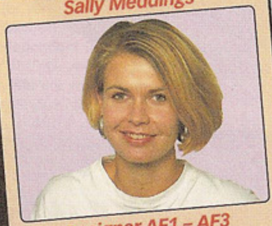
Jane Toft



Designer

A Senior Art Editor in Future's Living division, Jane designed the logo for *AF/ST Format*

Sally Meddings



Designer AF1 – AF3

Art assistant on the first issue of *AF*, appearing on the cover. Now going Dutch with N64

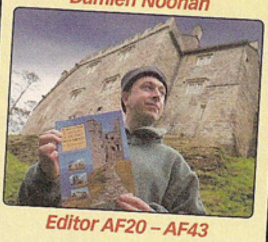
Pat McDonald



Tech Ed AF15 – AF50

Technical whizz turned his A3000 into a mobile light show, now on tour!

Damien Noonan



Editor AF20 – AF43

Damien can be seen proudly holding the book he wrote and produced himself

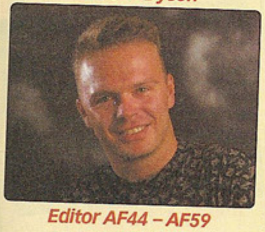
Clare Hodgson



Ed assistant AF30 – AF40

Our "Clur" swopped computer games for the world of *Needlecraft*

Marcus Dyson



Editor AF44 – AF59

Leaving Future to join Team17 put Marcus in *Alien Breed*, but now he works for DHL

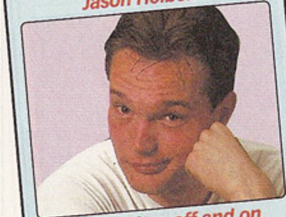
Steve Faragher



Specials Prod Ed 1993 – 1994

One of Steve's first jobs was to re-write a feature Nick wrote – he's never recovered

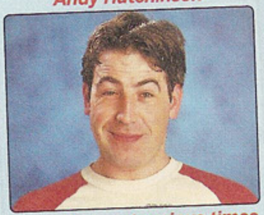
Jason Holborn



Staff Writer, off and on

Techy Jason finally succumbed to the evil charms of the PC. Sad...

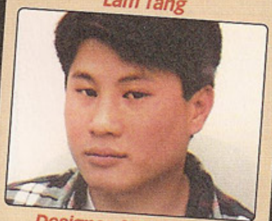
Andy Hutchinson



Contributor at various times

Hutch also turned to the evil charms of the PC and still writes freelance

Lam Tang



Designer AF35 – AF38

Not a long sojourn on *AF*, but Lam gave the *Official PlayStation* mag its look

Mark Wheatley



Prod Editor AF105 – AF126

Having worked on *AF* for almost two years, Mark is now moving to *Future Gamer*

PROD EDITOR

I started on *Amiga Format* with an in-depth knowledge of *Sensible Soccer* and very little else, but after almost two years as Prod Ed (an apt title as the job mainly involves prodding people until they start to work), I've been really impressed at how much passion the Amiga inspires and how there really is a community based around it. After this issue I'm off to join ex-*AF*ers Wiffy and Steve Bradley on *Future Gamer*, and I hope it won't be long before we're reviewing state of the art games for the new Amiga.

of Amiga owners out there for whom a new version of the OS can't come quickly enough.

As for *Amiga Format*, we've covered all the best stories in the history of the Amiga, apart from, perhaps, its inception. We were the first to break the news of Commodore and Escom's bankruptcy, we reported on the A3000 while Commodore were still denying the machine existed, even half an hour before it was officially launched, and we've populated an entire company with Amiga people (that'll be Future then). Our CD edition (the first regularly scheduled Amiga magazine CD-ROM, I might add) has gone from strength to strength, adding new features all the time, from our *AFCDFind* database of CD contents to the new *AFCDInstall* program, due to début in the next issue.

As a magazine, I like to think that *AF* is closer than ever to its readers. They may be fewer now than in the

> **"As for AF, we've covered all the best stories in the history of the Amiga, apart from, perhaps, its inception."**

SISTERS ARE DOING IT FOR THEMSELVES...

***Amiga Format* wasn't on its own at Future. For a time it had two sister mags in the shape of *Amiga Shopper* and *Amiga Power*. Here are Dave Taylor and Jonathan Nash respectively to talk about their mags:**

The slightly more serious sister magazine to *Amiga Format*, *Amiga Shopper* "didn't do games". We used to be the best techie Amiga magazine around and the Amiga Answers section was always one of the most popular. With features and reviews, a huge PD section and some killer coverdisks, *Amiga Shopper* continued for a lot longer than many pundits expected.

In the end though, we fell victim to the market and to the success of the then new CD edition of *Amiga Format*. The final editor, Dave Taylor (that's me!), continued to write for *Amiga Format* for years and is now editor of *.net*, the Internet magazine, where he spends too much time twiddling with HTML and *Javascript*.

The Matt Bielby Golden Age. Hurrah! Bitsy snookums. Hnnngh. Do the Write Thing, Ocean are a crap company. I wish them all dead. Dog food and a smaller one. Red Bull, F-Max – WE WERE ALWAYS RIGHT. Useless, cretinous morons.

Year Zero switching to 14,4 – BNP 5. Kick Nick Faldo's Face Off. Bob, obv. Sinister mega-global corporations. 0836-SECRET-IRONY. Gold! Always believing! Mighty pop gestalt, natch. 50% average, 60% complete only. MPLETE CONTROL! Haven't played it. Let's all go into the sunshine and play. Not long now. (Dies.)

All to the tune of Hooked On A Feeling. Oh, and the Amiga was dead in 1993. Byeeeee!

10 TOP PIECES OF SOFTWARE

- **Directory Opus** – While Workbench stagnated, *DOpus* drove the Amiga onwards and is ever-improving.
- **Personal Paint** – Even though *DPaint* dropped the ball with graphics cards, *PPaint* was there to improve on its features.
- **NetConnect 2** – This integrated suite of software has meant that it's easier than ever to get online.
- **YAM** – Marcel Beck's one-man crusade to bring the best email package ever to the people resulted in this excellent tool.
- **Lightwave** – Even though v5 was a bit of a disaster, it's still more powerful than any other Amiga renderer – so far.
- **Scala** – No longer developed but still leads the way in multimedia.
- **ImageFX** – Constantly developed, it's the best image processing package available.
- **PageStream** – SoftLogik's DTP package has spread onto other machines, and is great here too.
- **TurboPrint** – An essential purchase for any printer owner.
- **Shapeshifter** – Although it wasn't the first (or last) Mac emulator, it was many people's first taste of the Macintosh.

Continued overleaf ➡

Chris Lloyd



Occasional contributor

Chris now works for the equally venerable computer mag, *PC Plus*

Gary Lord



Prod Ed AF26 – AF51

Gary went off to work for EMAP where he passes out of this history

Julie Tolley



Deputy Editor AF47 – AF61

Lovely Courtney Cox lookalike Jules is now an Assistant Publisher at Future

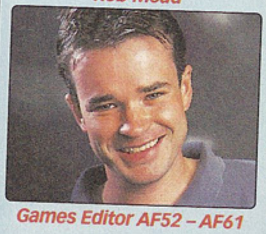
Tim Smith



Specials Editor 1990 – 1994

Tim always thought he was something special... he now runs his own company

Rob Mead



Games Editor AF52 – AF61

Rob took up caravanning when he left but is now working on *T3*

Richard Baguley



Staff writer AF45 – AF60

Penfold, er, Baggers, has recently moved to California to start a new life...

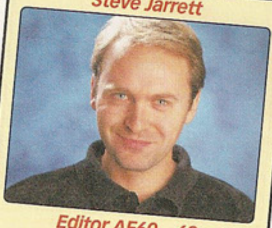
Andy Nuttall



Staff writer AF44 – AF51

Nuts left to join Amiga mag *The One* and is still writing for computer magazines

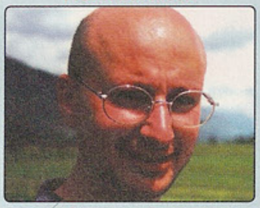
Steve Jarrett



Editor AF60 – 68

Steve launched gizmo mag *T3* not so long ago and is now busy on other things

Frank Bartucca



Art Chap – various years

Mad Frank resigned at least twice from his art job before finally going freelance

Sue Grant (now Bartucca)



Deputy Ed. AF62 – AF82

Sue is now a freelancer, often seen at Future. She must also be mad as she married Frank

10 TOP GAMES

- **SWOS** – One of the greatest footy games ever. Enough said.
- **Napalm** – A fantastic real-time *C&C* clone which looked stunning.
- **Quake** – Showed the Amiga could rival the PC.
- **Populous** – The first God game and probably the most original game concept of the era.
- **Lemmings** – A puzzling classic and major cross platform success story.
- **Dune** – An original, real-time strategy groundbreaker.
- **Dungeon Master** – The original icon driven almost real-time RPG.
- **F1GP** – The first Formula One title that was a racing car simulator and not just a game.
- **Secret of Monkey Island** – Point and click adventuring at its best, delivered in a well-crafted and amusing style.
- **Xenon II** – The definitive, slick shoot-em-up, scoring 104% in *Amiga Computing*.
- **Railroad Tycoon** – A management classic. Future Sid Meier games like *Civilization* were also incredibly successful.

heady days when *AF* was regularly selling to more than a quarter of a million people, but I think that we now concentrate more on what you'd like to see in the magazine, getting feedback on what you do and don't like about it, with regular surveys, our ever-popular letters section and email in the guise of direct mail to the team and the mailing list afb. Our Gallery section in the mag and on the CD looks better than ever these days, with more and more people preparing their images for use in print, rather than simply for the screen, and the quality of the contributions to the CD is generally very high indeed.

Over the 10 years *AF* has been running, the design of the magazine has also changed dramatically. This is partly as a result of technological improvements and familiarity with the software used to produce it, partly because there have been advances in printing and the costs for inks and paper aren't as high as they once were, meaning we can have a full colour magazine where once we were forced to limit colour to important sections of the mag. However, the main reason *Amiga Format* has improved is due to experience of what works and what doesn't work in the mag.

The small team currently working on *Amiga Format* can take all the credit for the way it looks and reads, with our Art Editor Colin being responsible for the look, Editor Ben Vost and Staff Writer Richard Drummond mainly responsible for all the words, plus a whole host of dedicated freelance writers, and our Production Editor Mark Wheatley generally being responsible for everything.

Anyway, enough about the wonders of the current team – where next for *Amiga Format*? I predict the next year will be a tempestuous one. We'll keep the readers we have but we probably won't get any new ones for a little while. However, by next March there'll be people who've bought one of the new machines looking for a mag to buy to give them info, and I have the feeling that either *Amiga Format* as it stands will close down sometime over the next two years and will re-open its doors with a different name and look, or, and I think this is preferable, it will mutate to cover both the old and new Amigas, gradually focusing less and less on the Classic range, exactly as we did for people who only had WB1.3 or no hard drive.

Given the sales figures that Jim Collas hopes to achieve over the year 2000, and the fact that the Amiga NG is

STAFF WRITER

Richard Drummond



Writer AF123 – present

Amiga Format's newest recruit, having joined Future in March 1999

I remember buying the first issue of *Amiga Format* way back in 1989. The idea that I would one day work for this very magazine never crossed my mind at that time.

I'd never even considered a career in journalism. I've had lots of odd (literally) jobs since leaving university, but when I learned of an opportunity at *CU Amiga* towards the end of 1997, I immediately thought, 'I could do that,' and applied. Much to my astonishment I got the post and spent six happy months there before EMAP wimped out and closed the magazine. Thank goodness I got the chance to join *Amiga Format*: not only do I love it here, but I'd really hate to now have to look for a proper job.

So, all of you readers, if you don't buy *Amiga Format* and (when it arrives) the new Amiga for yourselves, then do it for me – it'll keep me in my job and the lifestyle to which I've become accustomed...

Jessie Bennett



Designer AF50 – AF52

Top art bloke Jeff now designs stuff freelance in that there London

Dave Taylor



Disk Editor AF75 – AF123

Dave is now editor of *.net* magazine and still occasionally uses his Amiga

Richard Jones



Production Ed AF52 – AF74

Richard is still at Future, indulging in his all-pervading interest in football

Nick Veitch



Editor AF69 – AF121

Nick's now busy writing the third issue of *Computer Publishing* magazine

Sue White



Designer AF39 – AF76

Long-standing *AF* team member, the lovely Sue now stares at hairy bassists

Steve "Scottie" McGill



Games editor AF76 – AF86

Scottie is currently writing news for the Ayrshire leader, in Scotland of course!

Steve Bradley



Games editor AF62 – AF75

Our man from Harrowgate is now working hard on online mag *Future Gamer*

Linda Benson



Art Editor AF72 – AF94

The lovely Benson and Hedges now works for a design agency in Bristol

Dale Bradford



Columnist (varies)

Dale Bradford is now editor of independent computer retailer mag, *Indie*

Graeme Sandiford



Technical Editor AF73 – AF86

Graeme put together the first *AFCD*, but these days he runs Scitek's website

designed to branch into many different areas previously closed to "normal" computers, it may be that once again *Amiga Format* becomes a sister title to many new, targeted magazines all focusing in on one particular aspect of the new Amiga scene. I don't know.

What I do know is that like no time in the last five years, I'm really positive about the present, near and far future of the Amiga. The new OE is going to be gorgeous to use if the demonstration of QNX at last year's Cologne show was anything to go by, and given that Amiga owners are among the brightest computer users I've met (I don't just mean programmers or engineers or anything, I just mean generally well-informed), I'm sure that Amiga have a wealth of suggestions from their users that could be implemented. Also, the time is right for a sea change in the way we compute. Microsoft seem to constantly be in court and people don't like what they do, Intel are now being sued and the PC market is suffering the consequences of unregulated growth right now. Not only that, but major companies would dearly love to see the Amiga rise to pre-eminence again – Disney sent design sketches of Amigas they'd like to use, 3D animators the world over would dearly love something that gave them the speed of their current rendering systems but in a friendlier fashion and ex-Amiga users the world over ring us up and ask us for news every week.

> **"What I do know is that like no time in the last five years, I'm really positive about the present, near and far future..."**

The future's looking brighter than ever before for the Amiga, and we'll be here to give you all the latest info, in whatever guise we take.

Colin Nightingale



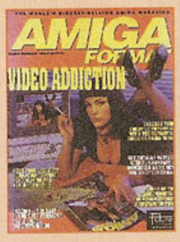
Designer AF97 – present

"Amiga Format is now looking better than ever, even if I do say so myself"

ART EDITOR

I started working on *Amiga Format* on issue 97, making this a slightly celebratory 30 issues under my belt. Since working on other computer titles and consumer magazines, I came to the Amiga market a little bit on the green side. I vaguely remember hearing about them during my school days but was unaware of their profile and committed users – an unforgivable sin, I know. Since then I'm continually amazed at the people who still hold the Amiga platform fondly in their heart, despite working in different fields. In fact, I met a chap on holiday in Greece who originally did three weeks of work experience on *Amiga Format* and went on to program software on Amigas. I'm sure I saw a tear well up as he fondly reminisced.

My favourite cover has to be issue 81's *Pulp Fiction* pastiche as it just looks stunning.





10 TOP PIECES OF HARDWARE

- **CyberStormPPC** – phase 5's hybrid accelerator might not be as fast as it could be but it introduced the PPC to the Amiga.
- **Picasso II** – It's been bettered since, but likewise, it introduced affordable graphics cards.
- **GVP's A530** – This excellent bit of hardware added an '030 and a hard drive to an A500.
- **MicroniK tower** – The first tower to exist for the A1200 started a rage for them.
- **Power Flyer** – Both the A1200 and eagerly-awaited A4000 versions deserve a prize for opening up Amigas to UltraDMA.
- **CDTV** – Simply for starting (and ending) the Amiga's ground-breaking CD revolution.
- **Pace Solo** – The best v90 modem that's also a fax and answer machine (with *STFax*).
- **Video Toaster** – Never available in PAL, but the backbone of many an American TV station.
- **Philips CM8833-2** – The single best video resolution monitor ever made. It looked good and its picture was great.
- **Wizard 3-button mouse** – The Amiga always supported a three-button mouse, but this was the one to use.

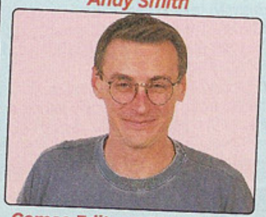
Cathy McKinnon



Art Assistant AF86 – AF104

The gorgeous Cathy is now fully ensconced as the Art Editor on *GamesMaster*

Andy Smith



Games Editor AF90 – AF118

Charles Hawtrey lookalike Andy is now editor of e-zine *Future Gamer*

Andrea Ball



Production Ed AF82 – AF104

Andrea's now Prod Ed on *N64* magazine and much prefers playing with consoles

Vicki West



Production AF100 – AF104

Vicki was one of the first of Future Publishing's so-called "brat packers"

Jason Frith



Production AF122 – present

Jason takes our sack of film and magically brings it back as shiny, new magazines

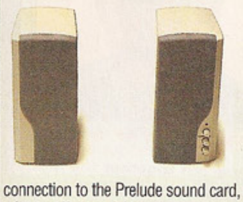
EYELINE

Bringing you the latest Amiga News from Eyetech
http://welcome.to/amiga.world

Latest News in Brief

AMIGA FORMAT 10TH BIRTHDAY PRESENT

Free 240W PMPO Amplified Speakers until the end of July



For all orders placed up to 31st July 1999 for EITHER a monitor/scandoubler/flickerfixer package OR a Prelude sound card - we will include a pair of superb quality 240W PMPO mains-powered amplified speakers absolutely free of charge (normally £24.95). The audio output to these speakers is via a 3.5mm jack for direct connection to the Prelude sound card, CDROM audio jack or EZ Tower audio adapter. If you wish to connect them direct to your Amiga's phono outputs you will need to buy an adapter (ADPT-AUD-MJF/2PM) at £3.95. Due to the weight of these speakers there will be a small additional carriage charge if supplied with the Prelude sound card.

EYETECH AT THE WORLD OF AMIGA '99

The World of Amiga '99 has finally been fixed for 24-25 July in London and - of course - Eyetech will be there

However . . . it's a long way from North Yorkshire to London - so there is obviously a limit to the range and quantity of our product range that we will be able to bring with us to the show. So, if there are particular products you would like to buy - or just see demonstrated - please ring, write or email with your requests and we will do our best to meet them.

SCANNER PRICE DROP

If you are thinking of buying a flatbed scanner for your A1200 now is the time to act. We have made a special purchase of the award-winning Umax 610S SCSI scanner which allows us to reduce the bundle price of the scanner, Photoscope software for the Amiga and ArtEffect 1.5SE image manipulation software to a never-to-be-repeated level.

The scanner's optical resolution is 180,000 pixels (equal to 540,000 bytes) per square inch, which is the ideal compromise between image quality and file size (An 11" x 8" scan at this resolution - for example -would take nearly 50Mb). **This fantastic scanner bundle is now available for just £149.95 - but only whilst stocks last.**

EZLINK - Home Automation from your Amiga

The ultimate interface for your A1200

Control your Amiga using a TV etc remote control!

Control your infrared-enabled appliances from your Amiga!

EZLink is a unique interface for any WB2.04+ Amiga. Plugging into the joystick port via a short cable, the EZLink box translates infrared remote control signals into AREXX commands for controlling your Amiga - or optionally into signals that emulate an Amiga mouse or joystick. This means that you can use your remote control to - for example - control a SCALA presentation, control a CDROM player, take picture with a digital camera connected to your Amiga etc. You can also use programs running on your Amiga to control other infrared-enabled appliances - such as TVs, video recorders, light dimmers etc. **The price for this remarkable interface is just £29.95 including software. Suitable remote control handsets are also available for £9.95.**

MK2 PortJunior & PortPlus now available

The popular PortJunior (1 x serial port) and PortPlus (2 x Serial & 1 x Parallel), high-speed Serial/Parallel interfaces for the A1200 - introduced by Eyetech around 18 months ago - have been updated. In particular, the Mk2 versions solve compatability problems experienced on some A1200 motherboards with 'noisy' clock port signals. (This could cause some Amigas to 'hang' on internet - but not bulletin board -access.) In addition, the driver software has been completely revised, and now includes a utility program to allow a PC serial mouse or trackball to be used with the A1200. Enhancements have also been made to the PortPlus parallel driver to cater for initialisation anomalies in some older/slower printers. **The good news is that the prices remain the same at just £39.95 for the PortJunior Mk 2 and £59.95 for the PortPlus Mk 2.**

Amiga Internet Packages at 33% discount whilst stocks last

If you're not yet on the Net there couldn't be a better - or cheaper time to get connected. We are offering the superb Internet Connection package above, the acclaimed NetConnect 2.2 internet software suite and a 56K V90 external voice/data/fax modem with cables and PSU for a special price of just £99.95 - saving over £50 on the individual component prices!

Eyeline Direct - a monthly Amiga newsletter delivered to your door for just £6* per year!

Issue 2 is out now and includes a complete guide to A1200 motherboard/chipset revisions, technical tips from our own workshops and special offers only open to Eyeline Direct subscribers. Just ring, write or fax the Eyetech sales team to place your order.

* UK only. EC add £3.00, Worldwide add £6.00

FIVE NEW PRE-CONFIGURED MK4 EZ-TOWER MAGIC PACK SYSTEMS

Although the basic Amiga International desktop console Magic Pack still represents excellent value for money (see the box-out below) more and more customers have been asking us for new Amiga 1200s which are already EZTowered up. So here they are, five pre-configured systems to suit different applicants and budgets. All systems come with brand new KS 3.1/WB 3.1 disk and manuals, mouse, 2mb graphics memory and a fantastic productivity software bundle including Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, & Pinball Mania & Whizz games. Hard drive versions also come with Scala MM300 preinstalled.

A1200T-LE (A1200T - Light Edition)

This is the best choice for existing A1200 users who want to upgrade to a new Workbench 3.1 machine and add their existing hard drives and other peripherals and accessories themselves.

A1200T-PS4 (A1200 ProSystem-4)

The A1200 Professional System 4 comes complete and ready-to-run with 3.2GB hardware, 24-speed CDROM, EZCD-XL buffered interface, '030/40 accelerator with MMU, FPU, 8mb and a CDDA/Amiga audio mixer output. Other options available - see table on the right.

A1200T-PS4/XL (A1200T ProSystem-4 XL

This system is configured as for the A1200T-PS4 but with a faster CDROM and an 040/28mhz accelerator with FPU, MMU, 16mb memory and a pair of mains-powered 240w PMPO stereo speakers.

A1200T-SE (A1200T - Studio Edition)

This is the system for serious Amiga-based multimedia work. It is configured as the A1200T/PS/4XLS but comes with an LS120 drive (reads & writes 1.44 PC diskettes & 120MB Amiga/PC cartridges), an EZVGA scandoubler/flickerfixer and a 15" SVGA digital monitor.

A1200T-SE/XL (A1200T - Studio Edition XL)

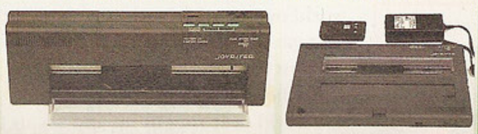
This is the ultimate A1200 multimedia tower system. It is configured as the A1200-SE system above and uprated to include a CDReWriter with MakeCD software and 10 blank CD-recordable disks, a 4.3GB hard drive, an 060/66 accelerator with 32mb memory, a 17" digital SVGA monitor, a Prelude 1200TW full duplex hi-fi sound card and software and a 600 watt PMPO amplified sound system with stereo speakers and subwoofer.

System Components A1200T -	LE	PS4	PS4/XL	SE	SE/XL
Mk4 EZTower	Yes	Yes	Yes	Yes	Yes
PC keyboard & keyboard adapter	Yes	Yes	Yes	Yes	Yes
Upgrade to A4000 k/b and k/b adapter	+£20	+£20	+£20	+£20	+£20
A1200 motherboard with K/S 3.1/WB3.1	Yes	Yes	Yes	Yes	Yes
Sony floppy drive & EZDFO interface	Yes	Yes	Yes	Yes	Yes
Magic Pack productivity software + 2 games	Yes	Yes	Yes	Yes	Yes
Upgradeable to full EZPC Tower system	Yes	Yes	Yes	Yes	Yes
Scala MM300 multimedia software	n/a	Yes	Yes	Yes	Yes
EZCD-XL 4-device buffered interface	n/a	Yes	Yes	Yes	Yes
EZTower CD audio/Amiga audio mixer	n/a	Yes	Yes	Yes	Yes
3.2GB Tower drive with WB3.1 installed	n/a	Yes	Yes	Yes	n/a
4.2GB Tower drive with WB3.1 installed	n/a	+£20	+£20	+£20	Yes
LS120 with 1 cartridge & EZIDE s/w	n/a	+£80	+£80	Yes	n/a
CDRom / CDReWriter + 10 gold disks	n/a	24x	32x	32x	CDRW+GD
1230/40 MMU FPU accelerator - 8 MIPS	n/a	Yes	n/a	n/a	n/a
1240/28 MMU FPU accelerator - 21 MIPS	n/a	+£60	Yes	Yes	n/a
1240/40SE MMU FPU accelerator - 30 MIPS	n/a	+£100	+£40	+£40	n/a
1260/66 MMU FPU accelerator - 51 MIPS	n/a	+£250	+£185	+£185	Yes
Memory included (ring for upgrade prices)	n/a	8MB	16MB	16MB	32MB
EZVGA scandoubler with flickerfixer	n/a	+£80	+£80	Yes	Yes
15" SVGA monitor	n/a	+£110	+£110	Yes	n/a
17" SVGA monitor	n/a	+£190	+£190	+£75	Yes
Prelude1200TW hifi full duplex sound card	n/a	+£140	+£140	+£140	Yes
Amplifier (PMPO watts), speakers (+ subwoofer)	n/a	n/a	240W	240W	600W+SW
Cost with options as specified:	£299.95	£549.95	£669.95	£999.95	£1799.95

If you don't have the need or the space for an A1200 Tower System then we can still supply brand new A1200 desktop console Magic Packs - either floppy drive only, or upgraded to a 170mb hard drive, EZCD-XL buffered interface and external CDROM socket with CDROM i/f.

A1200 diskette desktop console Magic Pack - £179.95
A1200 170MB HD desktop console Magic Pack - £248.95

PORTABLE PRINTERS FROM FUJITSU FROM JUST £39.96



The left picture shows Fujitsu ready for use
The right picture shows the printer flat packed with PSU and battery pack

We have managed to obtain limited stocks of portable printers by Fujitsu. The size is just 30 x 21 x 2.5cm (11.7" x 8.3" x 1") when packed in its transport wallet and 30 x 10.5 x 5cm (WxHxD) when in use.

The printer uses a near-silent thermal printhead, which can either use a thermal ribbon for printing in high quality onto plain paper, or, for economical draft printing, it will print directly onto low cost thermal fax paper.

It comes complete with a thermal print ribbon, a 100-240v PSU adapter (standard IEC 'kettle lead' required), manual and built-in Epson Q and Proprinter 24xe emulators (which are supported by Workbench and Turboprint printer drivers). In addition the printer can be operated from an optional (Camcorder-type) Ni-Cd rechargeable battery pack. These are very well engineered units and come with a 12 month return-to-base warranty (excluding printhead and consumables). Our price is just **£49.95** whilst stocks last. Other accessories are available as follows:

Thermal ribbon cartridges	**£4.95**
6v, 1200mA rechargeable battery pack	**£14.95**
Thermal fax paper per 100ft roll, 8.5" wide	**£4.95**
IEC AC mains 'kettle lead'	**£2.50**
All-pins-connected printer cable	**£9.95**

KBPlus Cordless Infra-red keyboard (with mouse facilities) now available for desktop console or towered A1200s, A4000s and CD32/SX32's

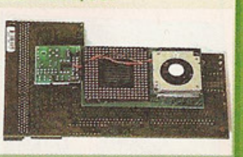


For everyday use of your Amiga (A1200/A4000/CD32 & SX32) a cordless keyboard may seem to be an unnecessary indulgence. However, if you ever use your Amiga for presentations/demonstrations in group environments - either professionally or as part of your leisure activities - the KBPlus will prove invaluable. The KBPlus is a compact unit - just 38 x 18.5 x 2.8cm, and weighs just 800 grams. It can operate at a distance of up to 5 metres (16 feet) from the compact receiver unit and features integral mouse/trackball functionality.

The keyboard output of the receiver unit is connected to your Amiga via the EZKeySE interface, and the 'mouse' output is connected to a PortJunior/PortPlus serial port. If you are using the KBPlus in conjunction with a desktop console A1200, then you will continue to have full use of the A1200's existing (built-in) keyboard. The KBPlus is priced at **just £39.95** or **£59.95** complete with EZKey SE interface. A PortJunior MK2 serial interface (required for 'mouse' usage) is available for just **£30** if purchased at the same time.

LIMITED EDITION 1260/75LC 60 MIPS ACCELERATOR

Exclusively available from Eyetech - at a price lower than that of the 1260/66!



The fastest 680x0 accelerator for any Amiga is now available (exclusively) from Eyetech. Rated by Sysinfo at around 60 MIPS the accelerator is suitable for both desktop and towered A1200s. The integer processing speed of the 75MHz 060 is - in Simon Goodwin's words - 'awesome', being up to 2200% faster than that of an an 030/50! A.I. recommend an '060 processor to get the most out of OS 3.5 - see separate news story below.

The 1260/75 LC comes with a full MMU but no FPU as no internal or external Motorola FPU module will work at these speeds . As most Amiga software is supplied with non-MMU versions, these should still easily out-perform the FPU versions on a lesser processor in all but a handful of cases. And now for the best news of all. You can have the fastest O/S-compliant Amiga on the planet for just **£264.95** - the same price as the 39mips 1260/50 - see 'Latest News' story.

OS 3.5 UPGRADE

OS 3.5 is on track for delivery in a few months time, so now is the time to start preparing your A1200 to be OS 3.5-ready. We will be shipping OS 3.5 (estimated price £34.95) from the date of its official release. Why not place an advanced order to ensure you get your copy at the earliest opportunity? Amiga Inc recommend the following configurations:

For 'acceptable' performance:

'030 accelerator	ACC-030-40-1S	£59.95
Scandoubler/Flickerfixer	EZVGA range	from £48.95
Modem	MOD-56K 56K	£69.95

You will also need:

3.1 ROMs	SYS-KS31-ROM	£29.95
. . . or SYS-KS31-MPUG (w/3.1 disks and MP s/w)		£49.95

To take full advantage of OS 3.5:

'060 Accelerator	ACC-060-50	£267.95
16-bit sound card	ADPT-AUD-PL12-DT	£129.95
I/O Accelerator	INT-SER-PTJR	£39.95

The ideal way to update your Commodore A1200



Magic Upgrade Pack

3.1 Kickstart ROMs, Photogenics 1.2SE, 3.1 Workbench (6 disks), Personal Paint 6.4, Wordworth 4.1SE, Organiser 1.1, Turbocalc 3.5, Pinball Mania & Whizz, Datastore 1.1Workbench 3.1 manuals, Magic Pack Application s/w manuals . .all for just £49.95!!

A1200 EZTower systems, EZPC Tower systems, Magic Packs and accessories

EZPC-PRO & NEW ENTRY-LEVEL EXPANSION SYSTEMS FOR YOUR A1200

3 pre-configured EZPC-Pro systems to suit different applications and pockets

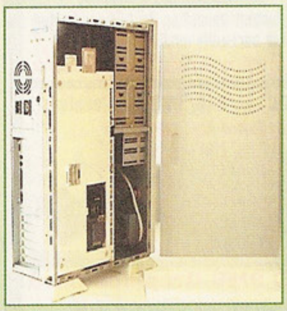
The EZPC system works by making the PC motherboard act as a slave processor to your A1200 - looking after the the operation of the systems accessories whilst you and your Amiga get on with creative work. (You can of course use the PC as a computer in its own right if you really insist!)

It's also important to understand that EZPC A1200 expansion system is based on a real Amiga and is not at all comparable with other PC-only systems running a clever, but slow, Amiga emulator as a PC application.

In fact there are such a range of applications that the EZPC system can open up to an Amiga user that we have introduced three systems pre-configured for different types of use. These are:

A1200 EZ-PC TOWER-HSE (Home Studio Edition). £999.95

The HSE configuration comes complete with TV tuner with cut-and-paste teletext facilities, 24-bit video frame grabber and video clip capture card, 30 bit colour scanner, 56K modem and unlimited internet access at local call rates - as well as the standard EZPC system components



The EZPC Tower system showing the A1200, the PC rear sockets, card slots and removable side panels

A1200 EZPC TOWER-DVE (Digital Video Edition). £1369.95

The DVE is fitted with a purpose-designed, hardware-based MJPEG non-linear video editing suite for home/semi-professional video production. It also comes with built-in CD Writer/ReWriter (with drag-and-drop CD writing software) for producing your own audio and video CDs.

A1200 EZPC TOWER-XLS. £1995.95

This must be the ultimate creative multimedia expansion platform for your A1200. It comes equipped with non-linear video editing hardware and software, A4 30-bit flatbed scanner, DVD ROM hardware & MPEG 2 decoder (for DVD video playback), CD ReWritable drive, 15" Colour Monitor, 56k data/fax/voice modem with voicemail and internet software - and much more.

A1200 EZPC TOWER-3.1+. £395.95



Finally, if your A1200 is feeling a bit tired we can supply your chosen EZPC Tower system with a brand new Kickstart 3.1 A1200, complete with Magic Pack software, 24 Speed CDROM, 3.2 GB hard drive (with W/b & Magic Pack software preinstalled), CD ReWriter drive, EZCD Mk4 interface and EZIDE software ready installed and connected up. All you need to do is to slot in your existing accelerator, fit your old hard drive into the external mounting drawer provided (see photo) switch on and start using your new A1200 EZPC Tower system.

All these three packs are designed for you to fit your existing A1200 in the EZPC Tower and connect it up. This normally takes around an hour, but if you would prefer to receive your system ready to use, we can arrange to collect your Amiga, do the work for you and ship your new system back all ready to plug-in to mains and phone outlets! Please ring for details.

EZPC-Pro Tower Model	HSE	DVE	XLS
EZPC-Tower/250W psu/PC mouse/HD floppy	Yes	Yes	Yes
EZ-Key k/b adapter PC k/b & rem switch	Yes	Yes	Yes
Ultra DMA hard drive 4.2GB	Yes	Yes	Yes
Upgrade to 17.2GB UDMA Drive	+£199.95	+£199.95	+£199.95
32-speed CDROM	Yes	Yes	n/a
DVD-ROM (inc 20xCDROM capability)	n/a	+£79.95u/g	Yes
CDReWriter (inc 6xCDROM) & s/w	n/a	Yes	Yes
10 x blank CDR's 650MB	n/a	Yes	Yes
100Mhz bus PC motherboard w/64MB	Yes	Yes	Yes
High perf high res 3D Gfx card w/MPEG-1	Yes	Yes	Yes
TV/teletext/framegrabber	Yes	n/a	n/a
Hardware MJPEG Video Editor	n/a	Yes	Yes
Hardware MPEG-2 Video decoder	n/a	+£59.95	Yes
CD-quality sound card with MIDI	Yes	Yes	Yes
Software controlled Amiga/PC audio mixer	Yes	Yes	Yes
Internal 60W PMPO monitor speakers	Yes	Yes	Yes
Siamese RTG2.5 software	Yes	Yes	Yes
Amiga PCMCIA & PC ethernet cards/cabs	Yes	Yes	Yes
30-bit high res A4 flatbed scanner	Yes	+£59.95	Yes
Internal 56k data/fax/voice modem	Yes	+£49.95	Yes
Unlimited access Internet package	Yes	+£49.95	+£49.95
15" SVGA monitor	+£109.95	+£109.95	Yes
17" SVGA monitor	+£189.95	+£189.95	+£99.95
Win 9.x/Lotus Smartsuite bundle	+£99.95	+£99.95	Yes
Miami Amiga TCP/IP stack	+£24.95	+£24.95	Yes
Cost with options as specified	£999.95	£1369.95	£1999.95



ENTRY LEVEL EZPC TOWER SYSTEMS NOW AVAILABLE FROM JUST £599.95

UPGRADE PACKS FOR EXISTING EZTOWER USERS JUST £499.95

The EZPC-Pro Tower configurations (featured on the next page) have produced a tremendous level of interest - and orders - from professional and serious home Amiga users alike. We have also had many requests for a lower cost, entry level solution, from those Amiga users whose budget is more modest. So here it is - the EZPC-SLE - giving most of the potential of the EZPC-Pro systems (featured opposite) in an affordable (but expansible) package.

The EZPC-SLE specification is as follows:

- ✔ Full EZTower Mk4 with removable side panels (not with upgrade kit)
- ✔ PC Keyboard & EZKey-SE/PC adapter PSU & 250w keyboard (not with upgrade kit)
- ✔ 100MHz-bus motherboard with 4x UDMA IDE ports
- ✔ 333M II CPU with 1MB cache memory
- ✔ 2 x high speed serial & 1 x EPP parallel port
- ✔ 32MB 100MHz memory
- ✔ 8MB SVGA SIS Graphics
- ✔ 16 bit 3D sound record and playback
- ✔ 3.2GB UDMA hard drive
- ✔ 24 speed CDROM
- ✔ PC mouse
- ✔ Remote Amiga/PC keyboard switch
- ✔ Siamese 2.1 RTG serial Amiga-PC networking software and cable.
- ✔ TV/Teletext tuner with 24-bit still & video capture and Amiga composite video input
- ✔ EZVGA-INSD internal scandoubler and BMon switch to display your Amiga output on a PC screen

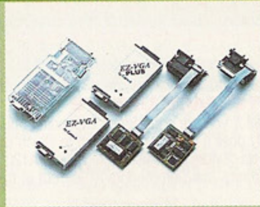
You will also need to have Windows 9x operating system and an SVGA PC monitor - see the panel on the EZPC-Pro Tower system panel for further information.

A collection, installation and delivery service is also available - please ring for details.

EZVGA Scandoublers & Flickerfixers from just £48.95

All scandoublers/flickerfixers allow the Amigas 15Khz modes to display on a PC SVGA monitor. Flickerfixers allow 15KHz interlaced screens to be displayed, rock-steady, at twice the standard vertical resolution. Other modes are passed through unaltered.

EZVGA-Mk2	Compact, external, upgradeable scandoubler (to full FF)	£69.95
EZVGA-Plus	Compact, external scandoubler with full FF	£99.95
EZVGA-SEFF	Economy external scandoubler with full FF	£89.95
EZVGA-INSD	Internal A1200/A4000 scandoubler (not upgradeable)	£48.95
EZVGA-INFF	Internal A1200/A4000 scandoubler with full FF	£79.95
EZVGA-INFF2	Internal A1200/A4000 s/doubler with full FF for BMON	£89.95



AMIGA SVGA MONITORS

For use with Amiga Zorro & the new PPC Graphics Cards, Scandoublers & the EZPC-Tower system



- ✔ Special pricing on scandoublers/flickerfixers bought with monitors from just £45 extra
- ✔ Monitor specifications are quoted as the highest vertical refresh rate at the maximum resolution. Higher refresh rates (>=72Hz) at lower resolutions are available and give a more visually relaxing display.
- ✔ Scandoubler/flickerfixers have resolutions governed by the Amiga's AA/AGA chipset and are restricted to a maximum vertical refresh of 73Hz and a maximum usable resolution of 724Hx566V.
- ✔ The PPC BVision supports 1600x1280@72Hz. You will not gain the full benefit of this superb graphics card without a monitor that supports this resolution at that refresh rate.

14" SVGA 0.28DP, 1024Hx768V	**@ 60Hz**	**£89.95**
15" SVGA 0.28DP, 1024Hx768V	**@ 60Hz**	**£119.95**
17" SVGA 0.28DP, 1280Hx1024V	**@ 60Hz**	**£199.95**
Engineering workstation grade monitor, 160MHz, Diamondtron tube:		
17" SVGA 0.25DP, 1600Hx1280V	**@ 75Hz**	**£399.95**

SPECIAL OFFER New15" monitors from £99.95 - ring for details

6 models of BMON are available from £39.95 - send for details

The BMon takes two video inputs - one from an Amiga's AA chipset (either directly or via a scandoubler/flickerfixer) and the other from a graphics card (BVision, Cybervision, Picasso, Ateo bus card etc) - and switches your SVGA or multisync monitor between them. The BMon uses high quality video switchers so - unlike conventional switchboxes - there is no significant loss of quality from either source. It can also be used - in its SMon form - for switching an SVGA monitor between a PC and Amiga system. As standard the BMon accepts input from a BVision or Cybervision card and from an Eyetech EZVGA internal flickerfixer-2 . It is manually switched by a remote miniature toggle switch positioned - for example - on the front panel of a tower system.

The New Eyetech Mk 4 EZTower System - from just £79.95

"This is definitely one of the easiest solutions to building your own Tower" - Amiga Format

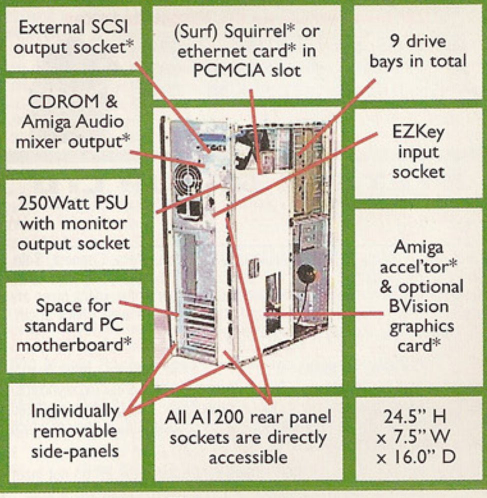
"The Eyetech Tower offers clever solutions with a Velcro easyfit mentality" - CU Amiga

- ✔ The easiest way to re-house your A1200 by far
- ✔ Expand your system with EZPC (EZTower Mk4) or Zorro slots (EZTower Z4)
- ✔ 250 W PSU with PC and Amiga power connectors
- ✔ No expensive PCMCIA right-angle adapter required
- ✔ Available in 5 models to suit different skills and budgets
- ✔ The only tower allowing both PC & A1200 in one case

	Backplate Kit	DIY* EZTower	Full EZTower
DFO: face plate & ribbon cable	Yes	Yes	Yes
Custom backpanel w/SCSI, audio KOs	Yes	Yes	Yes
A1200 power & LED adptrs	Yes	Yes	Yes
CE-approved metal PC case	n/a	Yes	Yes
No of bays/PSU capacity	n/a	9/250W	9/250W
Directly accessible PCMCIA slot	Yes	Yes	Yes
DIY assembly instructions	Yes	Yes	n/a
Installation instructions	Yes	Yes	Yes
PC board/Siamese compatibility	Yes	Yes	Yes
Assembled & A1200-ready	No	No	Yes
Eyetech installation option	No	No	Yes
Cost with options as specified	£39.95	£79.95	£99.95
With EZKey/PC k/b (w/A4k k/b+£20)	n/a	£99.95	£119.95

*With the DIY EZ-Tower you have to remove the PC tower back panel and some internal shelving and fix the new back panel in place

* Optional extra not included in standard EZTower system



EZBus-Z4 - A new Zorro adapter from Eyetech featuring regular Z2 slots and 2x 19MB/s local bus connectors

EZTower-Z4 - A new EZTower specifically designed to take the EZbus-Z4

EZTowerZ4, k/b adapter, PC k.b & EZBus-Z4	£249.95
As above - introductory price - advance orders	£199.95

Peripherals & Storage

AWARD-WINNING UMAX SCSI FLATBED SCANNER



- 600 x 300dpi optical resolution, single-pass 24-bit A4 flatbed scanner
- Comes with Photoscope (Amiga) and Mac software. Compatible with all modern SCSI interfaces - including PPC, Blizzard & Classic Squirrel (but not Surf-Squirrel)
- PCW 'Best Scanner of 1998' Award - July 1998; PCW 'Best Scanner' September 1998
- **Highly-acclaimed ArtEffect-SE v1.5 (normally £59.95) free with this bundle whilst stocks last . . . .**

Special purchase of Amiga UMAX Scanner & PhotoScope/ArtEffect Bundle now just £149.95

The Top-Rated CD-Plus Range for the A1200

"Eyetech have come up with a real winner with this new CDROM drive" - Ben Vost, AF

If your A1200 hasn't got a CDROM then you don't know what you're missing!

At these prices there is really no excuse!



- ✔ Whisper quiet 24 or 32-speed CDROM mechanism
- ✔ EZCD-XL 4-device buffered interface, 3-connector 40-way and 2-connector 44-way cables included
- ✔ CDPlus driver software specially written for Eyetech by the author of IDE-fix
- ✔ Optional Amiga and CDDA audio mixer with Gold phono audio jacks - just £14.95 each
- ✔ 20-watt CE-approved PSU complete with 13A plug.
- ✔ Optional upgrade to MiniTower or Desktop case with 230W PSU (which can also hold extra drives and power your Amiga) just £20 extra!
- ✔ **2 Free CDs whilst stocks last**

Complete CDPlus Systems: 24-speed just £74.95; 32-speed just £84.95

Bare mechanisms for Towers: 24-speed just £34.95; 32-speed just £44.95!

A1200 EZWriter and EZReWriter CDROM Burners

Make your own music and data CD's, back up data for less than 0.15p/MB



- ✔ Both are IDE/ATAPI reader/writer units with MakeCD Amiga writing software
- ✔ EZWriter units cut 'Gold' CD blanks at 2x speed & read CDROM's at 8 speed
- ✔ EZReWriter units cut 'Gold' CD blanks and CD rewritable disks at 2x speed and read conventional CD's at 6 speed
- ✔ Gold 650MB CD blanks (for use with either model) are available at ten for £10 at time of purchase
- ✔ CD rewritable disks are just £5 each when bought with the EZReWriter



EZWriter Internal

EZWriter/EZReWriter Options

EZWriter-Bare	for A4000 or A1200 Tower (bare drive - no MakeCD)	£169.95
EZWriter-INT	for A4000 or A1200 Tower (with MakeCD)	£204.95
EZWriter-SE	External A1200 unit with separate 100w PSU	£249.95
EZWriter-Gold	External A1200 unit with int 40w PSU, Gold Audio skts	£279.95
EZWriter-MT	Mini-Tower-cased unit with 230w PSU which can house an additional LS120/Zip/CDROM & power your A1200	£269.95
EZReWriter-Bare	for A4000 or A1200 Tower (bare drive - no MakeCD)	£199.95
EZReWriter-INT	for A4000 or A1200 Tower (with MakeCD)	£238.95
EZReWriter-SE	External A1200 CD ReWriter with separate 100w PSU	£279.95
IDE interfaces	EZCD-SE I/F, 44-way & 40-way cables & CDROM s/w -	add £20
if required . . .	EZCD-Mk4 I/F, 44 & 40-way cables & EZ-IDE s/w -	add £30
	IDE-Flyer interface, cables & s/w -	add £50

- ✔ All drives come ready to use with WB3.0 pre-installed & WB2.x install script
- ✔ All drives over 200 MB come with over 45 top quality utilities (not shovelware) and MMe multimedia authoring s/w pre-installed, configured & ready-to-run

LS120 & Zip Drives (ATAPI i/f & EZIDE needed)

LS120 (HD Floppy/120MB Cart) - £79.95 3 x 120MB carts - £29.95
Zip Drive (Mac emul. compatible) - £79.95 3 x 100 MB carts - £29.95

TowerDrives (3.5" drives, 25mm high)

2.5GB - £89.95 3.2GB - £99.95 4.3GB - £109.95
17.2GB drive for EZPC system or IDE Flyer - £249.95

2.5" InstantDrives for the A600/A1200/SX32

20MB	Entry-level drive for the SX32/A600	£29.95
170MB	Entry-level drive for the SX32Pro/A1200	£49.95
260MB	Entry-level drive for the SX32Pro/A1200	£59.95
3.2GB	Ultraslim 9mm drive - A1200/600/SX32	£169.95
4.1GB	Ultraslim 9mm drive - A1200/600/SX32	£189.95



EYETECH GROUP LTD

The Old Bank, 12 West Green, Stokesley, North Yorkshire TS9 5BB, UK
Tel: 07000 4 AMIGA ~ 07000 4 26442 ~ +44(0)1642 713 185 Fax: 44(0)1642 713 634
Net: sales, info @eyetech.co.uk. www.eyetech.co.uk.

EYETECH

Accelerators & Interfaces

NEW

Apollo Accelerators for the A1200

1230/40 TURBO PRO MK3

High performance 1 or 2 simm entry level accelerators for A1200 desktop consoles or tower systems

MMU, FPU & 1 SIMM socket to 32MB only £59.95
MMU, FPU & 2 SIMM sockets to 64MB only £69.95



A1240/28	'040/28MHz/MMU/FPU*	(21 MIPS)	£124.95
A1240/40SE	'040/40MHz/MMU/FPU*	(30 MIPS)	£167.95
A1240/40	'040/40MHz/MMU/FPU*	(30 MIPS)	£184.95
A1260/50	'060/50MHz/MMU/FPU*	(39 MIPS)	£264.95
A1260/66	'060/66MHz/MMU/FPU*	(51 MIPS)	£349.95
A1260/75LC	'060/75MHz/MMU*	(60 MIPS)	£264.95

TIP: Buy your memory with the accelerator to ensure full compatibility

*To 32MB. Optional 2nd simm socket (tower only) offers 64MB total

The Apollo A1260/75LC is the fastest Operating System-supported Amiga accelerator currently available

20% off memory prices when bought with an Apollo or phase5 accelerator

Phase5 PowerUp A1200 PPC + '040/'060 Accelerators

Without SCSI [not upgradeable] inc. MMU & FPU

160 MHz 603e PPC '040/25/MMU.FPU only £199.95
160 MHz 603e PPC '060/50/MMU/FPU only £479.95
240 MHz 603e PPC '040/25/MMU/FPU only £319.95
240 MHz 603e PPC '060/50/MMU/FPU only £549.95



Add just £60 to the above prices for factory fitted on-board Fast SCSI II Interface

Blizzard Vision PPC 8MB Graphics Card

Unbelievable quality and speed - 1600x1280@72HZ!
No Zorro slots needed!
NEW! 8mb card - £159.95 or just £139.95 with a PPC

The fastest, most highly specified graphics card you can buy for your A1200

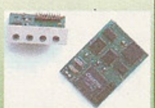
A1200 Clock Port Expansion Cards

For non-Zorro A1200s the best expansion route is via the (unused) clock port

PortJunior Mk2	1x 460kb serial port	39.95
IOBlix1200S	1x 1.5 MB/s serial port	49.95
IOBlix1200P	1x EPP parallel port	49.95
(Drivers for PC parallel port scanners, Zip drives etc., available shortly)		
PortPlus Mk2	2x460kb serial & 1x800kb parallel port	69.95
Catweasel-2	HD Amiga/PC floppy controller	49.95
ClockUp	4-way clock port expander	19.95

Prelude 16bit Hi-Fi Full Duplex Sound Card

"Easily the best A1200 sound card so far" - Tony Horgan, AF April 99



- ✔ Clockport fitting - no Zorro slots required
- ✔ Simultaneous recording, playback and mixing
- ✔ MIC, CD, AUX (Amiga audio) and line 3.5mm jack inputs. 3.5mm jack output to speakers.
- ✔ Mixes CD & Amiga audio etc automatically on bootup without invoking application programs.
- ✔ Extensive software support including Samplitude, Octamed SS & AHI drivers & PPC-based MPG3 audio playback

Desktop: £129.95 Tower : £149.95 Zorro: £189.95

Parallel & Serial expansion for Zorro-based systems

IOBLIX expandable Z2 I/O card for Tower Systems 2xS, 1xP - £89.95

BUFFERED INTERFACE UPDATE

A buffered IDE interface is essential if you are considering expanding your A1200's storage capability. Not only does it give you the option to attach up to 4 hard drive/CDROM/LS120/Zip etc devices but it also protects your A1200 by putting back the buffering electronics that Commodore/AT left out of the A1200 design.

However ... it is not just enough to buffer a few control signals - as with one-chip interface designs. It is also essential that the interface incorporates bidirectional data bus buffers (such interfaces need at least a 3 discrete chips and some additional components) to ensure that all the chips on your motherboard are properly protected.

Without data bus buffering ALL the data signals from ALL the custom chips are permanently connected to the IDE interface (and associated cables, drives etc). But the custom chips themselves only have sufficient output to drive one IDE device and then only on a short data cable. Without data bus buffering these chips are likely to be overloaded, causing system instability and/or loss of data on your hard drive. All 1200 buffered interfaces supplied by Eyetech are multichip designs with full data and control line buffering.

In addition, if you have a higher speed accelerator ('040 processor or above) then you should choose the high-performance EZCD-MK4 interface with AIPU technology for the best all-round performance.

If you are thinking of getting a hard drive larger than 4.3GB then you should buy the IDE-Flyer - or wait for OS3.5 which properly supports these drives and gives new, compatible versions of FFS, Format & HDToolbox programs.

EZCD Buffered Interfaces	SE	Mk4
4-Device Buff Interface & CDROM Software	£18.95	£28.95
CDROM s/w, 3x40 & 2x44-way cables	£28.95	£38.95
EZ-IDE s/w, 3x40 & 2x44-way cables	£38.95	£48.95
Elbox IDE Flyer I/F& CDROM file system (>4.3GB HD Support)		£54.95

EZKey2

- ✔ Autodetects and remaps Amiga & PC keyboards
- ✔ Plugs directly into the ribbon cable slot on the A1200

EZKey2 alone - for A1200 only - just	**£28.95**
EZKey2 and Windows keyboard	**£38.95**
EZKey2, A4000 k/b & 6-to-5 pin adapter	**£58.95**

EZKeySE

- ✔ Separate models for Amiga & PC keyboards
- ✔ Amiga version & k/b detects all multi-key combinations

EZKey-SE/Amiga - for A1200 & A600 - just	**£18.95**
EZKey-SE/Amiga A4K k/b & 6-5 pin adapter	**£48.95**
EZKey-SE/PC - for A1200 & A600 - just	**£24.95**
EZKey-SE/PC and Windows keyboard	**£34.95**

The Eyetech Gold Collection

Simply the best serious software you can buy for your Amiga!

Scala MM400



The best ever presentation and video editing software for the Amiga with extra backgrounds & fonts. Guaranteed to make MS PowerPoint users' jaws drop.

MM400 - £59.95 MM300->MM400u/g £39.95

UltraConv 4



The most comprehensive still image and animation conversion software available. Has over 130 built-in effects, batch conversion, QT AV builder w/audio, etc

UC4 - £39.95 UC4 bought with SQ4 £29.95

ScanQuix 4



The definitive Amiga scanner driver for most Epson HP, Artek, Mustek & Canon SCSI scanners & Epson parallel. Also ScanExpress 6000P via the IOBlix12P.

SQ4 - £59.95 SQ3->SQ4 u/g £29.95

PhotoScope



Software specially designed for the award-winning UMAX 610S, 1200S & 1220S SCSI 30-bit A4 flatbed scanners by the author of ScanQuix.

PHS- £59.95 PHS/ArtEfx/Umax Scner- £159.95

CamControl



Digital Camera serial interface control & download software for the Amiga for most popular Kodak, Fuji, Casio, Minolta, Mustek and Olympus digital cameras.

CamControl - £59.95

Samplitude



The definitive Amiga hard disk recording, sampling and FFT filtering package. Samplitude Opus allows virtual (non-destructive) projects of 16 tracks (4 in LE)

SampOpus - £149.95 SampOpus-LE - £49.95

Siamese RTG



The out-of-the-box Amiga-to-PC networking software which also allows you to use the PC's screen as a high res Amiga graphics card. 2.5 uses ethernet, 2.1 serial

SiSysRTG-2.1- £19.95 SiSysRTG-2.5- £89.95

MakeCD



The best CD-burning software for the Amiga, with extensive audio-CD support. For most SCSI & some ATAPI CDWriters/ReWriters. Bundled with EZWriter.

MCD3.x- TAO-Private - £38.95

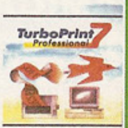
Netconnect



The all-in-one internet package for the Amiga including 11 highly integrated programs covering all internet-related activities from email and Web to newsgroups.

NC2.x - £49.95 NC2.x & NET-ISP - £69.95

TurboPrint 7



The most comprehensive, fastest replacement system for your Amiga. Supports the latest printers from most main manufacturers. Colour correction, spooling etc

TB7.x - £38.95 TB6.x->TB7.x u/g £18.95

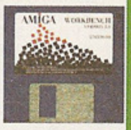
Miami



The definitive 'click and go' TCP/IP stack for the Amiga with built-in dialer. Essential for internet access or networking your Amiga to other computers.

Miami 3.x - £24.95

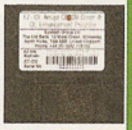
Workbench



Official Workbench disks for your Amiga. All packs include hard disk install software. WB3.1 & WB3.5 require 3.1 Kickstart ROMs (also available from us).

WB3.0 - £9.95 WB3.1 - £14.95 WB3.5 - £34.95(est)

EZ-IDE



The best replacement 4-device hard disk driver software available for a stock A1200/4000 which also supports ATAPI CDROM, CDWriters, LS120 & Zip drives.

EZIDE: £34.95 EZCD s/w->EZIDE u/g £14.95

WB2.x	WB3.x	Floppy disk
CDROM	PPC ready	AREXX enabled
Special bundle prices may apply - please ring		
Upgrade/trade-in price available - please ring		

Due to variations in exchange rates the prices of some products may change - up or down - from the prices shown. Please ring or check our website [www.eyetech.co.uk/MAIN/APRICE.HTM] for the latest prices before ordering.

EYETECH AMIGA PARTS & PRICE INDEX AUGUST 1999 TEL: +44 (0)1642-713-185 - 07000 4 AMIGA

Interfaces and Adapters: EZ-Key, DIY Tower Components

ADPT-EZK2	Mk 2 Amiga/PC k/b adpt -> A1200 kbd direct connect	28.95
ADPT-EZK2-W95	Mk2 Amiga/PC k/b->A1200 dir connect +Win95 kbd	38.95
ADPT-EZSE-A	EZKey-SE Amiga 5p DIN k/b adapter for A1200/A600	18.95
ADPT-EZSE-A/K	EZKey-SE Amiga + 6p->5p adptr + A4000 kbd bundle	48.95
ADPT-EZKSE-P	EZKey-SE PC 5p DIN k/b adapter for A1200/A600	24.95
ADPT-EZKSE-P/K	EZKey-SE PC k/b adapter for A1200/A600 + Win95 kbd	34.95
ADPT-HD-2/3	2.5"/44way->3.5"/40w+4w adpt & 2.5->3.5 mtg bracket	11.95
ADPT-HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
ADPT-KBD-5P6P	Amiga/PC k/b adapter 5p din-F ->6p m/d-M	5.95
ADPT-KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
ADPT-DF0-FP	Tower faceplate adapter for A1200 int FD	4.95

Interfaces and Adapters: A1200 Ethernet, SCSI

ADPT-PCM-ETH-C	PCMCIA ethernet card with Amiga/PC drivers	79.95
ADPT-PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs	129.95
CAB-UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
CAB-ETH-3M	Ethernet Coax + 2 x terminator 3m	9.95
ADPT-SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	69.95

I/F & Adapters: Flickerfixers, Genlocks, Video Digitisers VGA Adapters, Monitor Switches, Monitor Leads

ADPT-VGA-BV8M	BVision 8MB gfx card for A1200 (needs PPC)	159.95
ADPT-VGA-BMON/F	SVGA Monitor Switcher - BVision/CVision & EZVGA INFF2	39.95
ADPT-VGA-BMON/V	SVGA Monitor Switcher - BVision/CVision & 15pHD In/Ex SD/FF	44.95
ADPT-VGA-BMON/A	M/Sync Monitor Switcher - BVision/CVision & 23p RGB socket	44.95
ADPT-VGA-SMON/F	SVGA Mon Switch - Ateo/Picasso 15pHD Gfx & EZVGA INFF2	44.95
ADPT-VGA-SMON/V	SVGA Mon Switch - Ateo/Pic'o 15pHD & 15pHD In/Ex SD/FF	49.95
ADPT-VGA-SMON/A	M/Sync MonSwitch - Ateo/Pic'o 15pHD & 23p RGB socket	49.95
ADPT-VGA-AMON	Auto Amiga/CV64-3D m/sync monitor switch	39.95
ADPT-VGA-M2SD	EZ-VGA-Mk2 compact external s/doubler PLL u/gradable	69.95
ADPT-VGA-PLFF	EZ-VGA-Plus compact external SD+FF 23F-15F PLL	99.95
ADPT-VGA-SDUG	SDBL2 to SD+flickerfixer u/g	40.00
ADPT-VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgradable	48.95
ADPT-VGA-INSD2	EZ-VGA internal A1200 s/doubler for use with BMON	59.95
ADPT-VGA-INFF	EZ-VGA internal A1200 scandoubler w/ flickerfixer	79.95
ADPT-VGA-INFF2	EZ-VGA internal A1200 SD+FF for use with BMON	89.95
ADPT-VGA-SEFF	EZ-VGA-SE scandoubler+flickerfixer 23F-15F Xtal	89.95
ADPT-VGA-15M9F	Adapter from 15p HD-M VGA to 9pD-F	9.95
ADPT-VGA-9M15F	Monitor adapter 9p D-F to 15p HD-M	9.95
ADPT-VGA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
ADPT-VGA-UNBF	Amiga 23pD-F ->15pHD-F VGA adapter	12.95
ADPT-VGA-BUF	Amiga 23pD-F ->15pHD-F buffered adapter for A4000	16.95
ADPT-PGB-24RT	ProGrab 24-RT Amiga par. port video digitiser (no psu)	94.95
ADPT-PGB-PSU	PSU for ProGrab 24-RT	9.95
ADPT-GLK-COMP	EZ-Gen composite video Genlock for A1200	69.95

Interfaces and Adapters: A1200 Sound cards & software

INT-AUD-PL12-DT	Prelude1200 for A1200 DT console only	129.95
INT-AUD-PL12-TW	Prelude1200 for Tower w/ribbon cble/audio I/O brkt, CD i/f	149.95
INT-AUD-PL12-UG	Upgrade node from PL12-DT to PL12-TW	20.00
INT-AUD-PLZ2	Prelude ZorroII 16-bit full duplex sound card	189.95
ASW-SMP-OP	Samplitude Opus 16 channel, virtual projects, FFT filtering	149.95
ASW-SMP-LE	Samplitude-LE 4 channel , virtual projects, FFT filtering	49.95

I/F & Adapters - IDE/ATAPI & Software

INT-IDE-FLYR	Elbox 4-dev 32 bit high perf buf'd A1200 IDE i/f	54.95
ADPT-FLR-SPC-SP	ROM spacers for Elbox IDE-Flyer purchased w/ IDE-FLYR	4.95
ADPT-FLR-SPC	ROM spacers for Elbox IDE-Flyer purchased elsewhere	8.95
INT-121-EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/A1200 CDROM s/w	28.95
INT-121-EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	38.95
INT-121-EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44 cabs, EZIDE	48.95
INT-121-EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CDROM s/w	18.95
INT-121-EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	28.95
INT-121-EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	38.95
INT-4KI-CD4	4-device EIDE i/f for A4000 w/CDROM s/w	18.95
DVR-EZIDE	EIDE/ATAPI HD/CDROM/ZIP/LS120/SyQst drvr	34.95
DVR-EZIDE-CU	P/x upgrade to EZIDE from competitive product	14.95
DVR-EZIDE-SP	EIDE/ATAPI enhancer/CDROM Software Bundle Price	9.95

I/F & Adapters-Serial, Parallel, Floppy, Clock port expanders

INT-SER-PTJR	PortJunior Mk2 - 460KB serial i/f for A1200	39.95
INT-121-PTJR-SP	PortJunior Mk2 hi-speed ser i/f pur with CamControl s/w or KBPlus	30.00
INT-IOBL-S12	IOBlix 12S - 1.5Mbps serial i/f for A1200	49.95
INT-IOBL-P12	IOBlix 12P - EPP parallel port i/f for A1200	49.95
INT-SER-PTPL	PortPlus Mk2 - 2x 460KB ser + 1x 800KB par i/f for A1200	69.95
INT-IOBL-Z2	IOBlix Z2 - 4x1.5Mbps ser + 1x EPP par port ZorroII	89.95
INT-IOBL-Z2PX	1x EPP par port expan for INT-IOBL-Z2 (to 4xs+2xP)	19.95
INT-CLK-EXP	ClockUp 4-way clock port expander for A1200	19.95
INT-FDD-DF0	Interface for std Sony FDD for DF0 880KB	9.95

Cables & Cable Adapters: Audio & Mains

CAB-AUD-CD	CDROM invt'd T audio cab .6m + 2xRCA plg	9.95
CAB-AUD-MIX	RCA(phono)-M -> RCA-M+RCA-F 'Y' mixer lead 1.8m	6.95
CAB-AUD-2M2M	RCA(phono)-2xM -> RCA2xM stereo lead 1.8m	4.95
CAB-AUD-MJ/PH	3.5mm st minijack->2xphono-M plugs 1.2m	5.95
ADPT-AUD-MJF/2PM	3.5mm stereo jack to 2 x phono male	3.95
ADPT-AUD-RCA	RCA(phono)-M -> 2xRCA-F adapter 'Y' mixer	2.50
ADPT-AUD-RCA-G	RCA(phono)-M ->2xRCA-F gold plated adapt 'Y' mixer	3.50
CAB-IEC-1.5M	AC power cable 13A plug -> IEC skt 1.5m	2.50
PLUG-IEC	Rewirable IEC monitor plg for PSUs/MT/DT	4.95

Cables & Cable Adapters: Serial, Modem, SCSI, Printer

CAB-SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m for modem	7.95
CAB-SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m for modem	6.95
CAB-SER-NUL2M	Null modem cable w/ D9F & D25F at each end 2m	9.95
CAB-SER-NUL5M	Null modem cable w/ D9F & D25F at each end 5m	14.95
CAB-SER-NUL10M	Null modem cable w/ D9F & D25F at each end 10m	19.95
ADPT-SER-25F9M	25p-F to 9p-M serial RS232 adapter	4.95
ADPT-SER-25M9F	25p-M to 9p-F serial RS232 adapter	4.95
ADPT-SER-9M9M	9p-M to 9p-M serial RS232 gender changer	4.95
ADPT-SER-9F9F	9p-F to 9p-F serial RS232 gender changer	4.95
ADPT-SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)	14.95
CAB-SCS-25D/50C	SCSI cable DB25-M to Cent50-M 1m	9.95
CAB-SCS-25D/25D	SCSI cable DB25M to DB25M mac type 1m	9.95
CAB-SCS-50C/50C	SCSI cable Centr50M to Centr50M 1m	9.95
CAB-SCS-50H/50C	SCSI-2 cable 50h/pDM to Centr50M 1m for PPC	19.95
CAB-SCS-50H/25D	SCSI-2 cable 50h/pDM to 25D-M 1m for PPC	19.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Cables & Cable Adapters: VGA, Keyboard, Switchboxes, Cables, Scart Cables (See also BMON, SMON autoswitches above)

ADPT-SW-S/K	Dual monitor & k/b switchbox	14.95
ADPT-SW-S/K/M	Dual monitor, k/b & mouse switchbox	19.95
CAB-KBD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m	7.95
CAB-KBD-MM	5p DIN M - 5p DIN M k/b cable 1.2m	7.95
CAB-VGA-MF	15p DM-HD - 15p DF-HD VGA ext cable 2m	9.95
CAB-VGA-MM	15p DM-HD - 15p DM-HD VGA cable 2m	9.95
ADPT-SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART	12.95
ADPT-SCAR-RGB	Amiga 23p+2xRCA to RGB TV SCART + audio	12.95

Cables: HD, CDROM, Floppy, Clock Port Data, A1200 HD Power

CAB-PD-40F44F	2.5" (44F) to 3.5" (40F) data cab adapt for A1200 30cm	9.95
CAB-PD-2F	Power splitter floppy drive to hard drive + floppy	9.95
CAB-PD-30C	44 to 40way 3.5" HD data & pwr cabs - A1200	14.95
CAB-HD-KIT	A1200 full 3.5" hard drive fitting kit	24.95
CAB22-2W-10C	22way-F x2 A1200 clock port cable 10cm o/a	5.00
CAB34-2W-50C	34way-F x2 FDD ribbon cable for tower 50cm	9.95
CAB40-2W-20C	40 way IDE cable 2 connector 20cm	5.00
CAB40-3W-1M	40Way IDE/HD/CD cable 3 connector 1m o/a len	9.95
CAB40-3W-60C	40w-F x3 HD/CD/IDE cable 20+40=60cm o/a	9.95
CAB40-CUST	Custom cable 3x40way IDE up to 1.5m	19.95
CAB44-2W-13C	44way (2.5" HD) cable 2 connector, 13cm o/a	9.95
CAB44-2W-60C	44way (2.5" HD) cable 2 connector, 60cm o/a	19.95
CAB44-3W-12C	44way (2.5" HD) cable 3 connector, 12cm o/a	12.95
CAB44-3W-24C	44way (2.5" HD) 7+17cm,3 connector,24cm o/a	14.95
CAB50-CUST	Custom cable 50way SCSI 60cm w/4 x Cent or IDC con'trs	19.95

Cables: HD, CDROM, Floppy Power Splitters-Tower Systems

CABPW-1W-1F	Power converter cab HD-M -> FD-F	4.95
CABPW-2W-1H1F	HD/FD power splitter HD-M->1xHD-F/1xFD-F	6.95
CABPW-2W-2F	FDD power splitter 4pM->2xFD-F	6.95
CABPW-2W-2H	HD/CD power splitter 4p-M ->2x 4p-F 15cm	6.95
CABPW-3W-2H1F	HD/FD power splitter HD-M->2xHD-F/1xFD-F	8.95
CABPW-3W-3H	HD power splitter HD-M -> 3xHD-F	8.95
CAB-HD-PWXTN	4p-M -> 4p-F HD/CD power cab ext 90cm	9.95
CAB-HD-FD/4	23p-M floppy -> 4p-F HD/CD power 90cm	9.95

ISDN Term Adapters, 56k Modems & Net Access Bundles

even lower prices

NET-ISP	One time setup/support/unlimited usage/no ongoing net access charge (0845 call charges only) with 25MB web space, [illegible] email addresses, 90 days free net support.	29.95
NET-EYE-1	128Kbps ISDN T/A + NET-ISP as above	129.95
NET-EYE-3	128K ISDN T/A, Netconnect 2 + NET-ISP	169.95
NET-EYE-5	56Kb fax/voice modem + NET-ISP as above	89.95
NET-EYE-7	56Kb fax/voice mdm, Netconnect 2 + NET-ISP	99.95
MOD-56K	56K Voice/Data/Fax Modem External inc serial cable	69.95
MOD-ISDN	128K External ISDN terminal adapter inc serial cable	99.95
NET-REF	Internet Reference Book by D. Winder	2.00
NET-NC2	Netconnect 2.2 software	49.95

CDROM Systems including EZ-Tower & MT/DT Bundles

CD-SE-24X	CDPlus-SE system 24 speed with CDROM s/w	74.95
CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w	84.95
CD-DT/MT-24X	CDPlus Desktop/Minitower 24 x with CDROM s/w	94.95
CD-DT/MT-32X	CDPlus Desktop/Minitower 32 x with CDROM s/w	104.95
ADPT-AUD-CDSE	CDPlus-SE A1200/CD audio mixr/adapter	14.95
CAB44-CD-13C	44way (2.5" HD) cable purch with CD/HD 13cm	6.00
CAB40-DDC	A1200 IDE skt adptr 40F-40M with mtgs 15cm	9.95
CD24-BARE	Bare 24 speed CDROM mechanism for twr/A4k	34.95
CD32-BARE	Bare 32 speed ATAPI CDROM mechanism for twr/A4k	44.95

CDWriter/ReWriter Systems inc. EZ-Tower & MT/DT Bundles

CDR-BARE-2X8	EZWriter Mechanism (no MakeCD)	169.95
CDR-IN-2x8	EZWriter 2/8x with MakeCD for A4000,Tower	204.95
CDR-SE-2x8	EZWriter-SE external 2/8x with MakeCD	249.95
CDR-DT/MT-2x8	EZWriter Desktop/Minitower 2/8 speed with MakeCD	269.95
CDR-PL-2x8	EZWriter-Gold external 2/8x with MakeCD	279.95
CDRW-BARE-226	EZReWriter Mechanism (no MakeCD)	199.95
CDRW-IN-226	EZReWriter 2x2x6 w/MakeCD for A4k,Twr	238.95
CDRW-SE-226	EZReWriter-SE external 2x2x6 w/MakeCD	279.95
CDRW-PL-226	EZReWriter-Gold external 2x2x6 w/MakeCD	299.95
CDR-CDSE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
CDR-CDM4-UG	EZCDMk4+40+44way cabs + EZIDE s/w w/CDR	30.00
CDR-CDFL-UG	IDE-Flyer high-speed IDE i/f, s/w, cabs purch w/CDR	50.00
CDR-DSK-10	Recordable CD media (WORM) 650MB x10	14.95
CDR-DSK-10-SP	Recordable CD media 650MBx10 pur w/EZWriter	10.00
CDRW-DSK	Single CDrewritable disk 650MB	9.95
CDRW-DSK-SP	Single CDrewritable disk 650MB pur w/EZReWriter	5.00
DVR-MCD-TAO-P	MakeCD TAO (P) Amiga CD rec s/w w/ATAPI	38.95

EZTowerZ4 Systems, Z4 busboard expansions

CASE-DTZ4	DIY EZTower-Z4 250W PSU, LED adpt, FD cab/fp	89.95
CASE-DTZ4-PL	DIY EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	109.95
CASE-DTZ4-PLZ4	DIY EZTwr-Z4, EZKey, PC kbd, FD cab/fp Z4 slots	239.95
CASE-RTZ4	Ready-to-Use EZTwr-Z4 250W PSU, LED adpt, FD cab/fp	109.95
CASE-RTZ4-PL	RTU EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	129.95
CASE-RTZ4-PLZ4	RTU EZTwr-Z4 250W, PC kbd/adpt, FD cab/fp, Z4 slots	259.95
ADPT-Z4	Z4 adapter for A1200 5xZ2, 2xZ2, 2xclock ports	149.95
ADPT-Z4-SP	Z4 adapter as above 1st 100 orders	129.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00

EZTower Systems, MiniTower/Desktop Cases & Accessories

CASE-FT-DIY	EZTwr Mk4 kit w/250W, FD cab/fp, bkpl for self conv'n	79.95
CASE-FT-DIY-PLUS	EZTower kit w/250W PSU, EZKey, PC kbd, FD cab/fp	99.95
CASE-FT-RTU	Ready-built EZTower 250W PSU, LED adpt, FD cab/fp	99.95
CASE-FT-RTU-PLUS	Ready-built EZTwr w/250W, EZKey, PC kbd, FD cab/fp	119.95
CASE-DT	Desktop case with 200W+ psu for HD/CDROM	29.95
CASE-MT	MiniTower case wth 200W+ psu for HD/CDROM	29.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00
CASE-FT-EXKT	EZ-Tower conversion kit - No PC Tower	39.95
ADPT-AUD-EZTW	EZTwr audio mixer/adapter for A1200/CDROM	14.95
ADPT-SCSI-EZTW	EZTwr SCSI adpt 30cm 2xCent50F, 1xIDC50F	14.95
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.95
CAB-SER-SSQ	9pDM->9pDF SurfSquirrel EZTwr serial extn cable 50cm	9.95

SVGA Monitors- require SD and/or FF to use all Amiga modes

MON-14-.28	14" dig SVGA 0.28DP 1024x768@60Hz	89.95
MON-15-.28	15" dig SVGA 0.28DP 1024x768@60Hz	119.95
MON-17-.27	17" dig SVGA 0.27DP 1280x1024@60Hz	199.95
MON-17-.25	17" SVGA 160MHz,0.25DP,1600x1280@75Hz Diamondtron	399.95
ADPT-MON-SEFF	EZVGA-SE ext flickerfixer purch w/ monitor	85.00
ADPT-MON-M2SD	EZVGA-Mk2 ext s/dblr u/g'able purch w/ monitor	65.00
ADPT-MON-PLFF	EZVGA-Plus ext flickerfixer purch w/ monitor	90.00
ADPT-MON-INSD	EZ-VGA internal s/doubler purch w/ monitor	45.00
ADPT-MON-INSD2	EZ-VGA internal s/doubler purch w/ monitor for BMON	55.00
ADPT-MON-INFF	EZ-VGA internal f/fixer purch w/ monitor	75.00
ADPT-MON-INFF2	EZ-VGA internal f/fixer purch w/ monitor for BMON	85.00

Digital Cameras and Amiga Digital Camera Software

CAM-MIN-DMV	Minolta Dimage-V digicam w/psu, case, 2MB card CamC'trol	259.95
CAM-MIN-DMV-SM2	2MB Smartmedia card for Minolta Dimage-V digital camera	19.95
CAM-MIN-DMV-B40	40 x AA alkaline cells for Minolta Dimage-V digital camera	24.95
DVR-CAM-CAS	CamControl s/w for Casio QV10/100/300/700	29.95
DVR-CAM-FUJ	CamControl s/w for Fuji DS5/DS7 /DX7/DX9	29.95
DVR-CAM-KOD	CamControl s/w for Kodak DC20/DC25	29.95
DVR-CAM-MIN	CamControl s/w for Minolta Dimage V	29.95

Application Software & Drivers

ASW-MM400	Scala MM400 on CD	59.95
ASW-MM400-UG	Scala MM400 on CD with u/g from MM300	39.95
DVR-TBPR7	TurboPrint 7.x Amiga printer driver (English)	38.95
DVR-TB6/7-UG	TurboPrint 6.x to 7.x upgrade (send TB6 disk with order)	19.95

Amiga Image Conversion/Effects Software, Scanner Software, Scanner Bundles and Adapters

SCN-FBA4-BDL3	UMAX award-winning SCSI A4FB scanner with PScope	149.95
DVR-SQ4	ScanQuix4 + 1 driver (Epson/HP/Artec)	59.95
DVR-SQ4-U	ScanQuix4 + 1 driver (UMAX)	79.95
DVR-SQ4-UG	ScanQuix3 to SQ4 upgrade (trade-in & receipt reqd)	29.95
DVR-PHS	PhotoScope UMAX-SCSI Amiga Scanner Driver	59.95
ASW-UCV4	Ultraconv 4 Graphics, animation & effects Amiga s/ware	39.95
ASW-UCV4-SP	Ultraconv 4 Graphic s/w etc purchased with ScanQuix4	29.95
CAB-SCS-25D/50C-S	SCSI cable DB25-M to Cent50-M 1m pur with scanner	5.00
CAB-SCS-25D/25D-S	SCSI cable DB25M to DB25M mac type pur with scanner	5.00
CAB-SCS-50C/50C-S	SCSI cable Centr50M to Centr50M 1m pur w/scnr	5.00
CAB-SCS-50H/50C-S	SCSI-2 cable 50h/pDM to Cent50M 1m for PPC pur w/scnr	10.00
CAB-SCS-50H/25D-S	SCSI-2 cable 50h/pDM to 25D-M 1m for PPC pur w/scnr	10.00
ADPT-SCS-CSQR-SP	Classic Squirrel PCMCIA SCSI i/f 50pCM pur w/scnr	54.95
ACC-SCS-BLM4-SP	SCSI/Simm socket for Bliz 1230/50 Mk4 pur w/scnr	59.95
ADPT-SCS-50/50CF-SP	Centronics 50p-F to Centronics 50p-F (SQ) pur w/scnr	7.50
ADPT-SQ3-PAR	SQ3 adapter Epson scanner ->parallel port cable	9.95

Hard & Floppy Drive, CDROM, LS120 & Zip Mech. & Cases

FDD-ITL-1200	Replacement A1200/600 int FDD 880KB	24.95
FDD-ITL-BARE	Bare 1.44/880 Sony FDD for tower (needs EZDF0/Catwsl)	19.95
FDD-ITL-D/C/I	Twr int 880Kb FDD(Sony/EZDF0/cab bundle)	29.95
FDD-ITL-D/I	Twr intl 880Kb FDD (Sony/EZDF0) No cable	24.95
HD2-21	21MB 2.5" hard drive 90 days warranty	29.95
HD2-170	170MB 2.5" hard drive	49.95
HD2-260	260MB 2.5" hard drive	59.95
HD2-3.2	3.2GB ultra slim 2.5"drive, 9mm high (2 fit in std A1200)	169.95
HD2-4.1	4.1GB ultra slim 2.5"drive, 9mm high (2 fit in std A1200)	189.95
HD3-3.2	3.2GB 1"x3.5" IDE drive for tower	109.95
HD3-4.3	4.3GB 1"x3.5" IDE drive for tower	109.95
HD3-1.72	17.2GB drive for EZPC system or IDE Flyer	249.95
HD3-LS120	Panasonic LS120 Floppy/Optical 1.4/120MB	79.95
HD3-LS120-CT3	3-pack of 120MB (nominal) LS120 carts	29.95
HD3-ZIP-CT1	Single 100MB (nominal) Zip cartridge	14.95
HD3-ZIP-CT3	3-Pack of 100MB (nominal) Zip cartridges	29.95
HD3-ZIP-IDE	Bare ATAPI/IDE Zip drive internal	79.95
CAB44-CD-13C	44way (2.5" HD) cable purchased with CD/HD 13cm	6.00
CASE-ZIP	Metal slim case-FDD/IDEZip/SyQuest/LS120	9.95
CASE-HD-ECON	External 3.5" HD case no psu	19.95
CASE-HD-REM	Removable drive case for 3.5" HD (metal) no psu	24.95

Keyboards, Mice, PSU's, Printers, Misc. Hardware

FAN-60MM	Cooling fan for A1200 60x60x25mm 5/12v	14.95
FAN-LP	CPU cooling fan for towered A1200 accelerators 12v	9.95
KBD-IR	KBPlus Infrared keyboard (PC output)	39.95
KBD-IR/A	KBPlus Infrared keyboard with EZKey SE/P Interface	59.95
KBD-A1200	Replacement A1200 k/b w/ribbon cable	24.95
KBD-A4000	A4000 keyboard with 5-pin mini-DIN plug	34.95
KBD-WIN95	Windows 95 keyboard with 5-pin AT DIN plug	12.95
MOU-WHI	Amiga Mouse	6.95
PRT-B&W-FUJ	Fujitsu portable thermal printer w/ribbon & PSU	49.95
PRT-B&W-FUJ-RIB	Replacement thermal transfer ribbon for PRT-B&W-FUJ	4.95
PRT-B&W-FUJ-BAT	NICD rechargeable battery for PRT-B&W-FUJ	14.95
PRT-B&W-FUJ-PPR	100ft x 8.5" Thermal paper for PRT-B&W-FUJ	4.95
PSU-100	100w PSU for Amiga (fit your old lead w/instrns,connect's)	29.95
PSU-200	200w PSU for Amiga (fit your old lead w/instrns,connect's)	39.95
PSU-230	200/250w replacement PSU for MT/DT/FT	29.95
PSU-A1200	A1200 23W PSU (original) 90 days warranty	19.95
SPK-60W-INT	5.25" Bay Internal mounting 60W PMPO speakers/amp	24.95
SPK-240W	240W PMPO speakers w/ PSU 3.5mm jack, AC mains PSU	24.95
SPK-600W	600W PMPO AC/mains spkrs w/ subwoofer	49.95

Accelerators: PowerPC with 680x0 Co-processor

ADPT-VGA-BV8M-SP	BVision 8MB A1200 gfx card pur w/ PPC acc	139.95
ACC-PPC-16-4025	Bliz'd PPC603/160MHz+040/25/FPU/ no SCSI	199.95
ACC-PPC-16-6050	Bliz'd PPC603/160MHz+060/50/FPU no SCSI	479.95
ACC-PPC-24-4025	Bliz'd PPC603/240MHz+040/25/FPU no SCSI	319.95
ACC-PPC-24-6050	Bliz'd PPC603/240MHz+060/50/FPU no SCSI	549.95
ACC-PPC-16S-4025	Bliz'd PPC603/160MHz+040/25/FPU/SCSI-2	268.95
ACC-PPC-16S-6050	Bliz'd PPC603/160MHz+060/50/FPU/SCSI-2	548.95
ACC-PPC-24S-4025	Bliz'd PPC603/240MHz+040/25/FPU/SCSI-2	388.95
ACC-PPC-20S-6050	Bliz'rd PPC603/200MHz+060/50/FPU/SCSI-2	548.95
ACC-PPC-24S-6050	Bliz'rd PPC603/240MHz+060/50/FPU/SCSI-2	618.95
ADPT-PWFD-5P	2nd A1200 m/bd powerfeed for PPC acc : PSU to 5p plug	19.95
ADPT-PWFD-FD	2nd A1200 m/bd powerfeed for PPC acc : PSU to FDD hdr	14.95
ADPT-PWFD-PPC	2nd A1200 m/bd powerfeed for PPC acc : PSU to PPC fan	14.95

Accelerators: Apollo 680xx

ACC-060-75LC	Apollo '060 MMU 75MHz A1200 acc (lim avail)	264.95
ACC-060-66	Apollo '060 MMU/FPU 66MHz A1200 acc (lim avail)	349.95
ACC-060-50	Apollo '060 MMU/FPU 50MHz A1200 acc (lim avail)	264.95
ACC-040-40	Apollo '040 MMU/FPU 40MHz A1200 accel	184.95
ACC-040-40-SE	Apollo '040 MMU/FPU 40MHz A1200 accel (20% o/c)	164.95
ACC-040-28	Apollo '040 MMU/FPU 28MHz A1200 accel	124.95
ACC-030-40-1S	Apollo '030 MMU/FPU 40MHz A1200 accel 1 simm skt	59.95
ACC-030-40-2S	Apollo '030 MMU/FPU 40MHz 2 simm skt	69.95
ACC-4/60-SSKT	Apollo 1230/40/60 2nd simm socket & fitting	20.00

Memory: Simms, Zip RAM, FPU's-Please ring for latest prices

MEM-32MB-72P	72 pin 32MB 32 bit simm 60ns for Amiga (+£10 for 1-sided)	79.95
MEM-16MB-72P	72 pin 16MB 32 bit simm 60ns for Amiga	44.95
MEM-8MB-72P	72 pin 8MB 32 bit simm 60ns for Amiga	24.95
MEM-4MB-72P	72 pin 4MB 32 bit simm 70ns	14.95

WB Disks, Kickstart ROMS, Manuals etc

SYS-WB30-DSK	Amiga WB3.0 disksx5 + Eyetech HD install	9.95
SYS-WB31-DSK	Amiga Workbench 3.1 disks x6 (w/ HD inst)	14.95
SYS-KS31-ROM	A1200 Kickstart 3.1 ROM chips (2 chips)	29.95
SYS-KS31-SET	A1200 K/s 3.1 ROMs & WB3.1 dskx6 (no manuals)	36.95
SYS-KS31-MPUG	A1200 Mag Pk u/g 3.1ROMs,WB3.1,appln s/w, manuals	49.95

EZPC-Tower & Siamese Systems & Components

EZPC-SLE-CF1	EZPC SiSys RTG2.1entry level system	599.95
EZPC-HSE-CF1	EZPC SiSys RTG2.5 system Home Studio Edition	999.95
EZPC-DVE-CF1	EZPC SiSys RTG2.5 system Digital Video Edition	1369.95
EZPC-XLS-CF1	EZPC SiSys RTG2.5 system - ultimate Amiga expansion	1999.95
EZPC-AMP-CF1	A1200 Magic Pack/24x/3.2GB/etc EZPC-Tower upgrade	399.95
EZPC-SLE-CF1-UG	EZPC SiSys RTG2.1entry level u/g (no EZTWR/kb/adpt)	499.95
PSW-W9X/SS	Windows 9x & Lotus SmartSuite bundle	99.95
SYS-SIA-ETH	Siamese System2.5 w/PC, Amiga ethernet	189.95
SYS-SIA-R25	Siamese System software RTG v2.5	99.95
SYS-SIA-R21	Siamese serial s/w RTG v2.1 (ref'ble agnst v2.5)	19.95
SYS-TCP-MIA	Miami TCP/IP stack for Amiga (reg'n fee paid)	24.95

CD32, SX32 & Accessories

ADPT-KBD-SX32P	SX32 Pro PC k/b adapter cable 10cm	9.95
CD32-JOY	CD32/SX32 joypad	9.95
CD32-PAL	CD32 console with 18Wpsu/joypad/RF lead	149.95
SX32-MK2	SX32 Mk2 Ram/Clock/FPU expander for CD32	149.95
SX32-P40EC	SX32 Pro 030EC/40MHz Acc/Ram/Clk/FPU to 64MB	199.95
SX32-P50	SX32 Pro 030/50MHz Acc/Ram/Clk/FPU to 64MB	249.95

A1200 Magic Packs, Accessories and Upgrade Bundles

AMP-STR-FDD	A1200 Starter Magic pack FDD vers /w s/w	179.95
AMP-STR-HD2	A1200 Starter Magic pack w/170 HD, EZCD i/f, skt & s/w	248.95
AMU-STH2-CDUG	24 x CDROM upgrade for AMP-STR-HD2 w/PSU	59.95
AMU-PRO-LS120	LS120 120/1.44/0.72MB drive ug w/PRO-PK3	74.95
AMT-LE	FDD Magic Pack in EZTower	299.95
AMT-PS4	EZTower PS/4, 24xCD, 3.2, 030/40, MMU, FPU, 8mb	549.95
AMT-PS4-XLS	EZTower PS/4XLS, 3.2, 040/28, 240w speakers	669.95
AMT-SE	EZTower-SE,32x,3.2,LS120,040/28,16mb,EZVGA,15"mon,240w	999.95
AMT-SE-XLS	EZTowerSE-XLS, as AMT-SE w/17"mon,Prel12TW,CDRW,600w	1799.95

Tools, Test Equipment, Motherboards & Workshop Services

PT-MBD-1200	Replacement A1200 m/b w/VID & RST fixes (no ROMs)	129.95
FIT-EZ-MAIN	A1200 to EZ-Tower fitting - A1200 + floppy drive	30.00
FIT-EZ-XTRA	Fitting/testing per customer-supplied periph into EZtwr	7.50
ADPT-PWFD-SL	2nd A1200 m/bd powerfeed for PPC acc : PSU to soldered con	20.00
REP-AM-2B/1D4	A1200 m/b rev 2B or 1D4 manfact'g bus timing fault fix	30.00
REP-AM-PCMRST	A1200 motherboard CC_RESET manfacturing fault fix	30.00
REP-AM-VID	A1200 m/b VGA-modes video tearing manfact'g fault fix	30.00

Amiga Audio

If you want to get stereo audio sound from your CD player and your Amiga at the same time, tune in to **Simon Goodwin**'s project.

AFCD42:-In_the_Mag-/Mixing



Stereo audio was an Amiga strength long before the word 'multimedia' became commonplace. Every Amiga has two phono sockets (also known as RCA or CINCH), carrying line level signals to a stereo monitor or amplifier. These connectors are also used on HiFi stereo cassette decks, tuners and audio CD players. If you're used to mono sound through a TV modulator, you'll be amazed by the improvement once your Amiga is re-routed through a decent 'separates' HiFi system.

There's no shortage of SCSI and IDE/ATAPI interfaces, drives and drivers to connect a CD-ROM and load software. Virtually all CD-ROM drives will also replay audio disks as they're derived from audio players and include the same 16-bit stereo digital-to-analogue converters, often integrated into their control circuits.

The challenge is listening to CD audio as well as the output from the Amiga. Many modern games expect a combination, running background mood music from CD, augmented by samples in memory for spot effects. It's often nice to be able to listen to CD audio without missing sonic cues from your Amiga software.

> "Many modern games expect background mood music from CD, augmented by samples in memory for spot effects."

SECTION – HARDWARE

Most CD-ROM drives have a headphone output on the front, with a volume control. The shaft of the plug is the earth connection, with left and right signals on tip and ring. This is conveniently accessible but lower in quality than the line output at the back of the drive. The headphone amplifier introduces noise and boosts interference from the drive motors, causing background buzz and zipping noises. It can also overload HiFi inputs, with potentially expensive consequences.

Many beginners switch from CD to Amiga output by swapping leads between this and the Amiga's phono outputs, but there are more convenient, better-sounding approaches. It's preferable to use the line output connector at the back of the drive, converting signals to standard format and level before mixing.

CD audio cables have three or four pole connectors. NEC, Sony, Mitsumi and Matsushita have their own standards, varying even among drives from the same manufacturer. The illustrations show the back panels of typical ATAPI and SCSI drives from Tatung and NEC.

Some drives have two digital audio output pins opposite the power input. These combine both channels in a serial data stream at over a megabit per second, like external gear using SP/DIF (domestic, phono) or AES/EBU (professional, XLR) digital audio standards. Current Amiga expansions lack these facilities so we'll stick with analogue for now.

SOLDER BATH

I recently rescued a drive from Bath with wires soldered directly onto the output pins. This is dodgy as there's too much risk of damage and short-circuits. Failing the manufacturer's cable, try a standard 0.1" pitch three or four way socket or individual push-fit crimp connectors.

If there are just three pins you can be confident that the middle one is the ground, with left and right either side, matching A3000T and A4000 connectors. These connectors are arranged LGR, or RGL from the other side; suck it and see as no harm can result.

If there are four pins at the CD end,

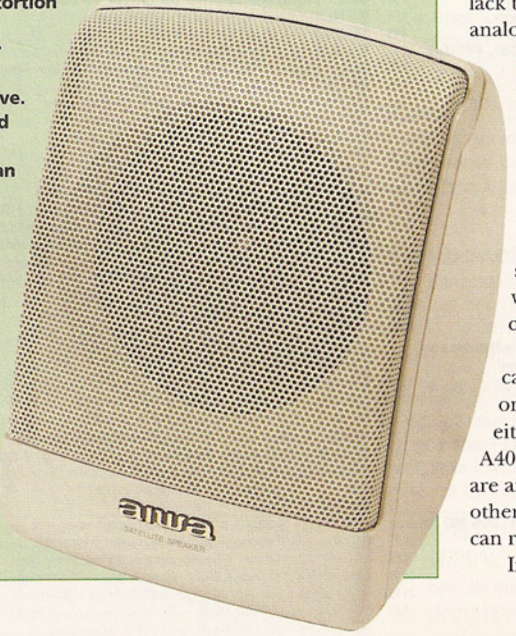
SPEAKERS AND POWER

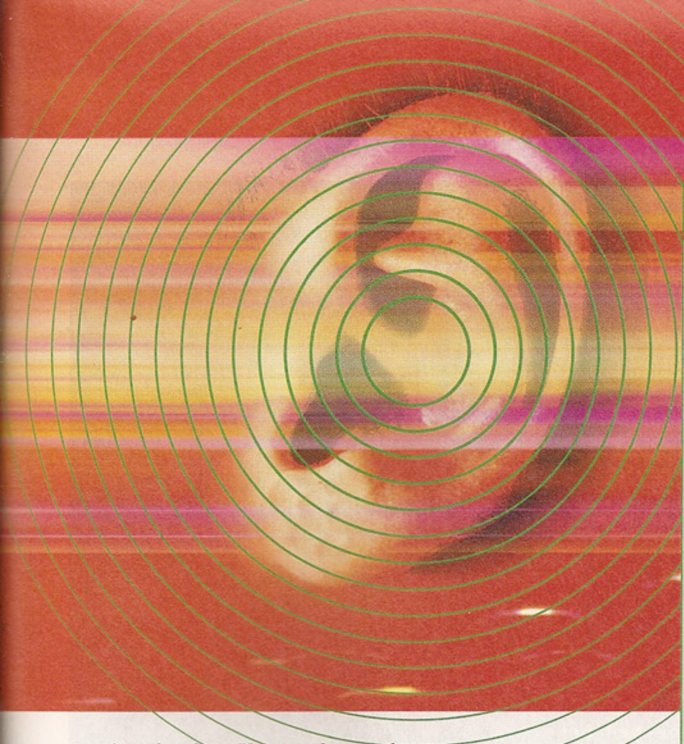
Specially-made 'computer speakers' vary in quality almost independent of specification or price. Try to hear them, loud and soft, before choosing. A £6 pair includes a mains power supply but subjects you to cheap transistor radio distortion through two 3" speakers. These claimed a rating of 120W, followed by the giveaway jargon 'PMPO' (Peak Music Power Output). These measure instantaneous peaks and creative accounting, rather than the average power of the sound wave.

PMPO numbers are typically 10 to 20 times the sustained average. RMS (Root Mean Square) power values are comparable, but indicate the sustained heat the amplifier can deliver, not the mechanical work done by the speakers, let alone their loudness which depends on the electrical and mechanical efficiency of the drivers and cabinet.

Most computer speakers have 3.5mm stereo jack leads, compatible with Walkman headphone sockets and cheap PC soundcards. Amiga-friendly twin phono to jack leads are fairly cheap and are widely available, sometimes in the same package.

You'll need speakers with an integral amplifier so look for a battery or preferably built-in mains power supply. You could borrow DC power from the Amiga's +5V or +12V supplies, but the bricks supplied with cheaper Amigas have little power to spare. Cheap PC adaptors can leach power from ISA slots in Zorro Amigas; most Amiga back panel connectors offer limited DC power.





SOFTWARE MIX

Once you've combined the signals you'll want to adjust their relative volumes. Amiga audio applications often have on-screen sliders to do this, but what about CD drives? The front-panel knobs only affect headphones, not the line-level signals on the back panel, and they seldom let you tweak the balance for when you're sitting nearer one speaker than the other.

Software can send messages over the SCSI or ATAPI bus, which fade CD audio up or down. *AFCD42* programs can mix and balance CD audio as easily as Amiga sounds. If you're really keen, use external electronic faders under RS232 serial control. Relevant instructions and software can be found on Aminet and the *AFCD*.

Some programs include CD faders. Oliver Kastl's *PlayCD*, shipped with *IDEfix*, *AlfaData* and Buddha expansions, has a mono slider. Pascal Rullier's freely-distributable *SCDplayer 1.2* has volume and balance controls. The shareware *Jukebox* software elegantly combines interacting master, left, right and balance sliders with ARexx.

Control GUIs can use commands written for SCSI drives or Commodore's cd.device. ATAPI IDE drives support SCSI commands so *SCSIutil* suits them too. The –v option adjusts four volume controls (for Quadraphonics?!) between 0 to 255.

Commands for cd.device suit CD[32] and CDTV and standard drives via CD emulation, optional with HiSoft's Squirrel and *CacheCDFS*. They're based on Commodore software standards, working at a higher level than SCSI or ATAPI. The *CDToolbox* CDVolume command sets replay volumes between 0 and 32,767, though practical control is coarser than this range implies.

one is redundant. You need to work out which of two configurations your drive uses. Recent production favours LGGR (Left Ground Ground Right) connections. This Sony scheme needs a four-way connector.

When the signals are arranged RGLG (Right Ground Left Ground) you can use just the first three and skip the second earth. The full connector has the advantage that left and right can't be swapped inadvertently.

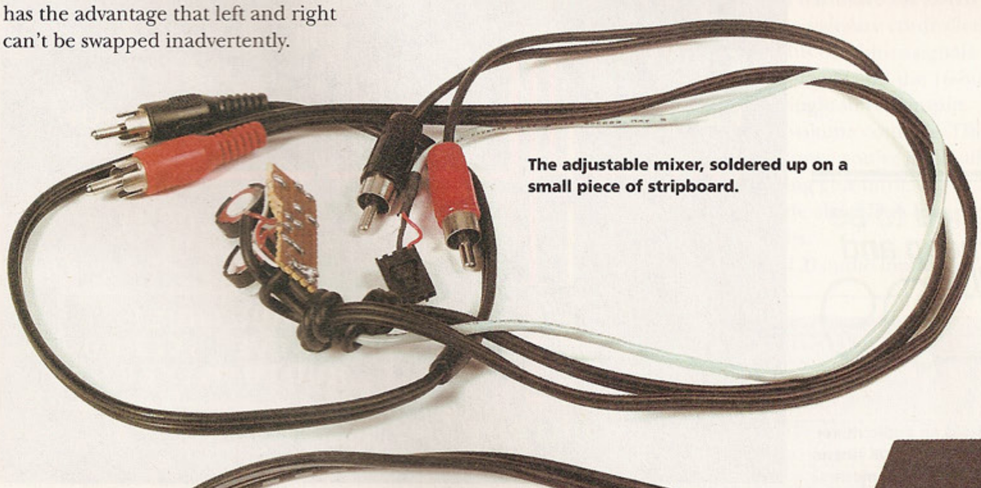
Aim to get a lead with the drive and adapt the other end to suit your setup. Failing that, CPC in Preston stock half a dozen types. Manufacturers can use any colour code they fancy, but the Left lead is typically white, Right Red and Ground Black.

MIXING

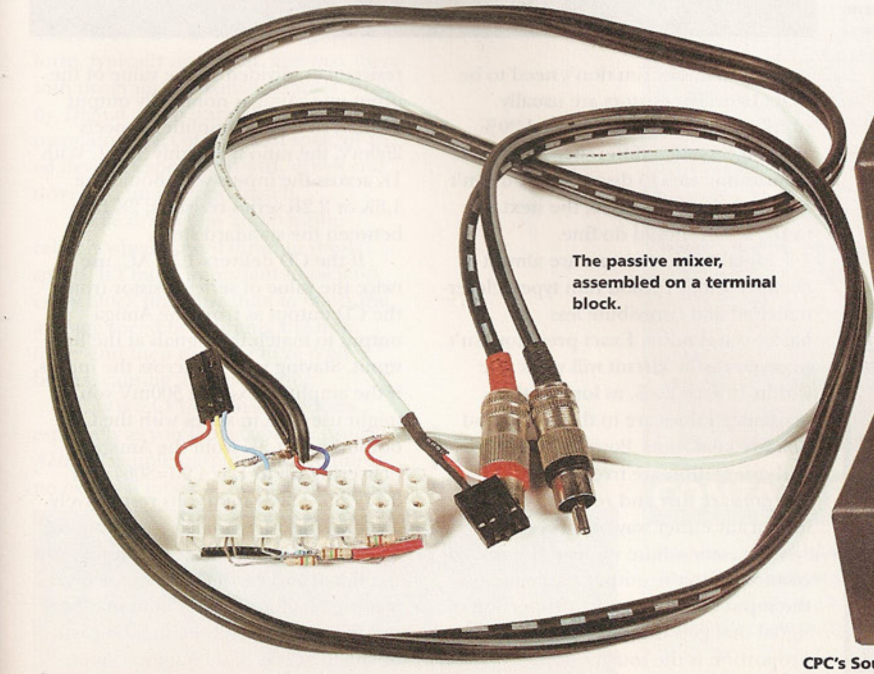
External cased drives should have standard stereo jack or phono sockets, but generally still need a mixer to combine and balance the levels. There's leeway in making the connection between line output and amplifier. The outputs have a low impedance and might supply up to a milliAmp of current, plenty for line inputs with nominally 10K Ohms input impedance. In general, a low impedance output drives higher impedance inputs.

If you join several outputs to one input, the outputs interact as the signal favours the low impedance path to earth through another, competing output circuit, rather than the intended input. Our circuits discourage this by introducing resistors between the outputs. These limit the current,

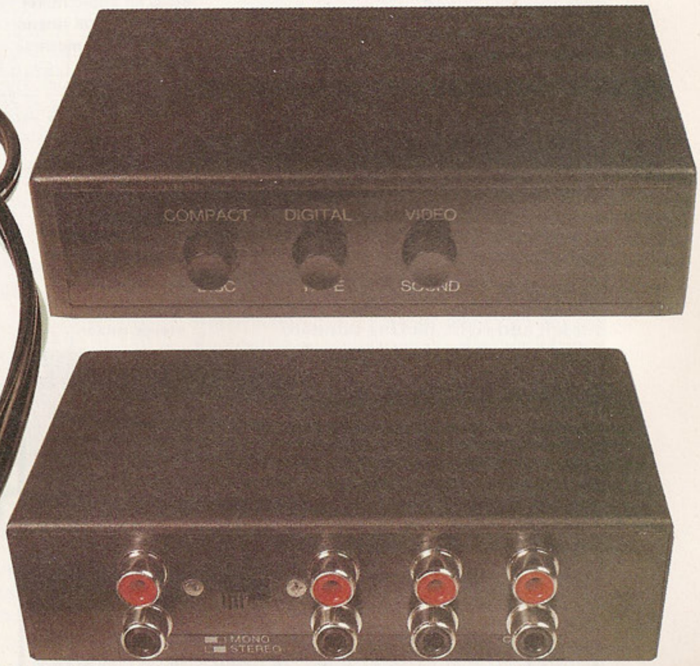
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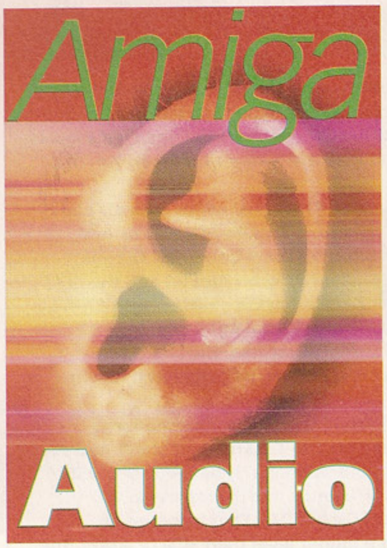
The adjustable mixer, soldered up on a small piece of stripboard.



The passive mixer, assembled on a terminal block.



CPC's SoundLab switchbox comes in handy when amps run out of inputs.



effectively preventing outputs strangling one another, and can balance signal levels so Amiga audio need not drown out the CD output, or vice versa.

AlfaData's simplest possible arrangement uses a pair of 5.6K resistors in series with the CD outputs. This works but risks mismatched volume levels. Our first circuit uses a couple of potentiometers. The input signals feed in from each side and out through the slider, so moving the slider determines the balance between CD and Amiga audio, or between any other pair of signals.

> Preset parts, designed to be set and left, are cheap and can be adjusted empirically to suit your equipment.

Any pair of linear potentiometers with a value of a few thousand Ohms is suitable. I used 10K presets which cost about 20 pence each, soldered to a piece of Veroboard. Preset parts, designed to be set and left, are cheap and can be adjusted empirically to suit your equipment.

RATIOS

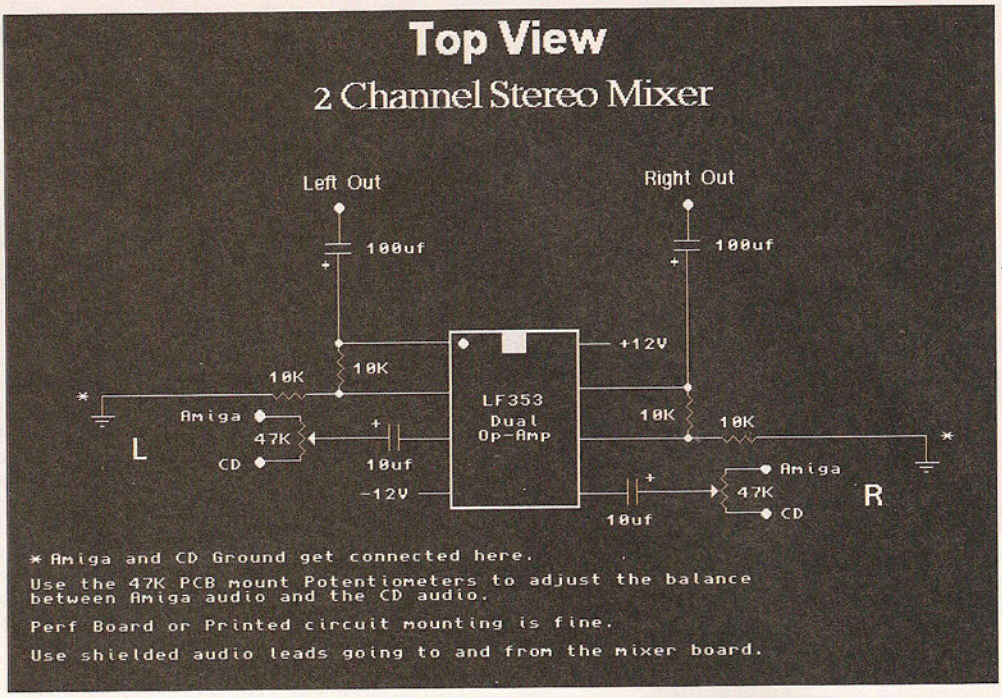
If soldering leaves you cold, fixed resistors are cheaper still and can be screwed, with the cables, to a plastic connector block. Use pairs of resistors for left and right, picking values to match the levels. You don't need to be exact because resistors are usually supplied in value bands spaced 20% apart, too small a difference for our logarithmic ears to discern. If you can't get quite the right value, the next one in the series should do fine.

Metal oxide resistors are almost as cheap as older carbon film types, closer-matched and contribute less background noise. Exact precision isn't necessary – the circuit will work fine within 10% or 20%, as long as the resistance values are in the right band of a few kiloOhms. Power ratings, size and orientation are irrelevant. The currents are tiny and resistors work identically either way round.

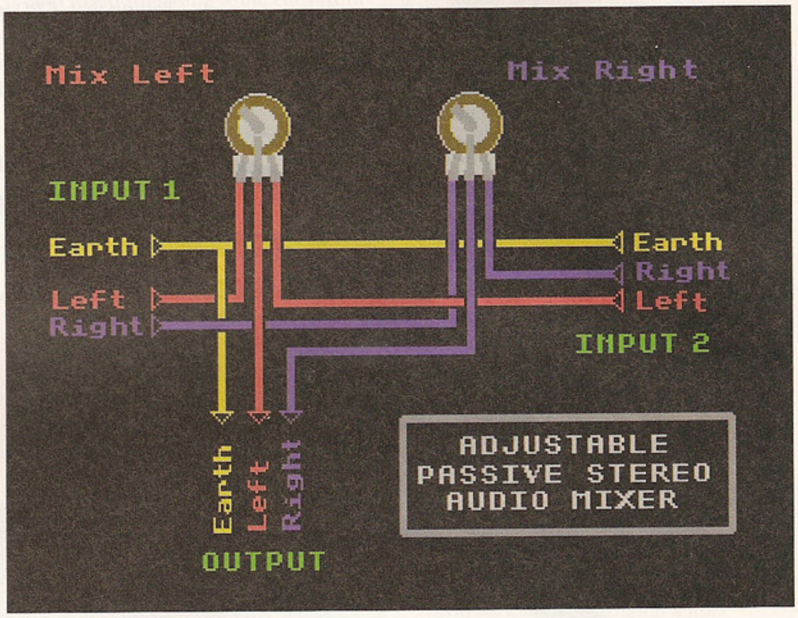
The ratio of the value of the resistor connected to the output to that across the input determines the proportion of signal that gets through. That proportion is the total of both resistances, divided by the value of the input one. Amigas nominally output 775mV, so if your amplifier expects 250mV, the ratio is roughly 3 to 1. With 1K across the inputs you should use 1.8K or 2.2K series resistors; 2K falls between the standard steps.

If the CD delivers 1.5V AC, use twice the value of series resistor from the CD output as from the Amiga output to match the signals at the line input. Staying with 1K across the inputs, if the amplifier expects 300mV you might use 3.9K in series with the CD outputs and 1.5K from the Amiga's, delivering up to 1.5/4.9 (=306) and 0.77/2.5 (=308) milliVolts respectively.

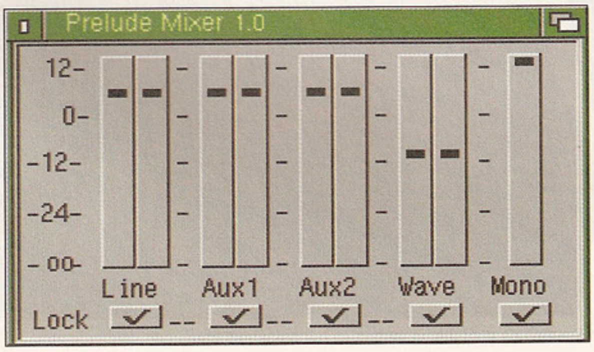
It's okay to connect one output to several inputs, as long as you don't swap the signal and earth connections over, leading to a loop. Mains hum may be minimised by disconnecting the earth or shield at one end of audio cables,



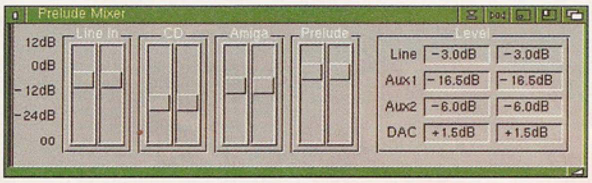
This active mixer design from Aminet boosts line outputs.



Build an audio mixer from two 10K linear potentiometers.



The *GadTools* front end for Prelude's multichannel stereo mixer.



The *MUI* version of the mixer shows levels numerically.

relying on the common power supply to complete the circuit. Remember, you should *never* disconnect your computer's mains earth!

Audio outputs should only pass AC; if you measure a DC voltage offset in the absence of signal, you might need to block this with a capacitor. Add around 22microFarads of low-voltage Electrolytic or ideally Tantalyum capacitor in each signal lead, with the positive end pointing towards the errant equipment.

INTERNAL MIXING

Those who hate DIY might be able to mix CD and Amiga audio by redeploying hardware they already own. The A3000T and A4000 include an obscure connector which inserts stereo signals into the audio chain, after the filter and before the final output buffers. This is ideal for CD mixing,

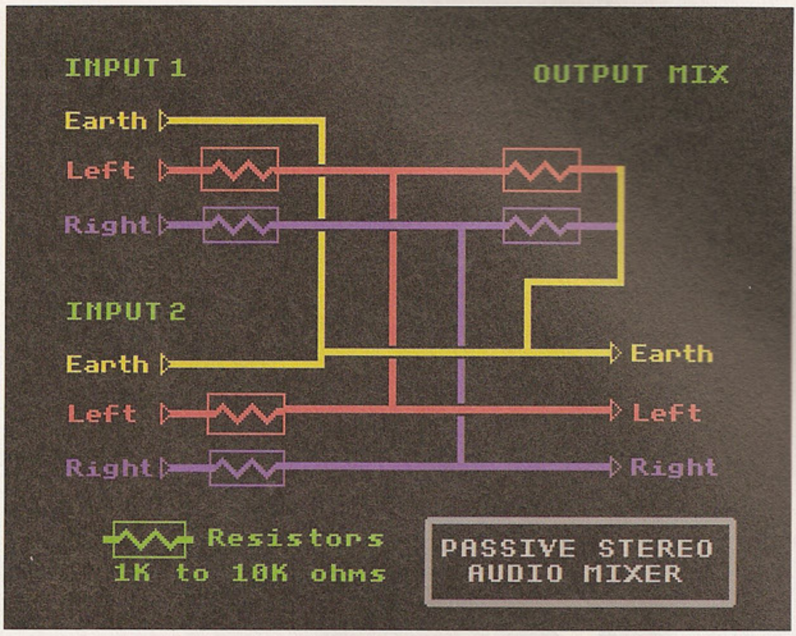
> It's more important to pick up every block first time than to boost the average speed by spinning the disk faster…

perhaps tweaking the CD output balance with software. This three-pin motherboard connector lurks close to the phono output sockets; consult figure D-1 in the A4000 manual or look for JCDINP between the video slot and Paula chip inside an A3000T.

The sneakier way is rather more demanding of your system but can work well on expanded Amigas. You can read audio from the CD drive in digital form, typically over SCSI, and mix them with program-controlled samples on the fly. Digital audio transfers aren't a mandatory part of the SCSI spec, or in cd.device. Experiment with drives and drivers to find a good match.

Some drives play audio more reliably when slowed down to single speed. It's more important to pick up every block first time than to boost the average speed by spinning the disk faster and then needing to re-read blocks, causing audible stutter.

This is a CPU-intensive process, especially as you'll probably be using *AHI* for sample output, but it requires no external mixer – the mixing is done digitally and the combined sound comes out of a single stereo line output, from a 16-bit soundcard, or from Paula at a pinch.



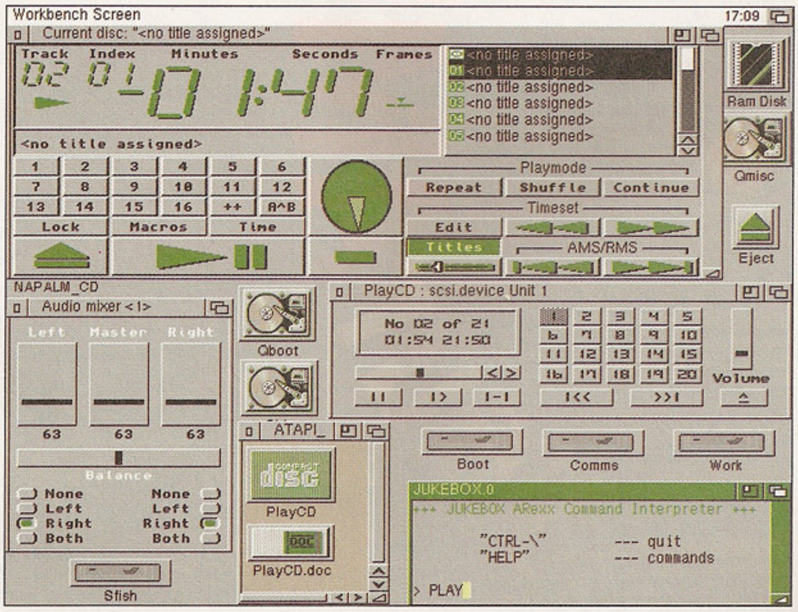
Six resistors form a simple two-input stereo mixer.

TYING UP

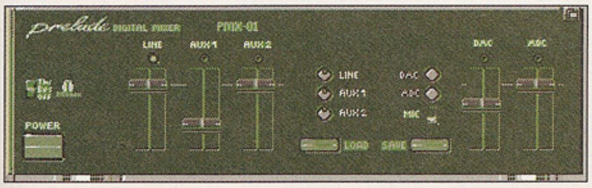
Prelude expansion hardware for Zorro or A1200 includes a software-controlled analogue mixer. This combines signals from the CD drive, Paula and the 16-bit soundcard into a single stereo output with independent volume controls. This is the ideal option once you've got it all wired up; the cabling gets intricate, especially as Prelude also offers low-level and line inputs.

Delfina boasts CD audio inputs as well as line sockets. Simpler soundcards might need to sample the Amiga output and mix it with *AHI* to get everything on one pair of plugs without extra hardware. DIY adaptors are a more flexible and CPU-friendly solution.

An outboard mixer is ideal, space permitting. I use a Soundlab three-way stereo switch and an Amdek MXK600 video sound mixer to master audio for the *AFCD*. There's no limit to the audio potential of an expanded Amiga, but if you're preoccupied with listening rather than original recording, the little adaptors described here are all you need to combine the benefits of data disks, native, CD and soundcard audio.



***PlayCD* has volume but *Jukebox* offers a lot more control.**



ACT's graphic front end for Prelude's mixer.

CONTACTS

Resistors, potentiometers and screened audio cable should cost just a few pence from Tandy and local electronics suppliers, or these Internet-aware firms:

http://www.cpc.co.uk – Spares, CD audio cables, switch boxes, etc.

http://www.farnell.co.uk – Components and Amiga-friendly webmastery.

http://www.maplin.co.uk – Retail and mail order electronics catalogue.



Screen PLAY

The latest games, hints and some clever programming from you!

AF'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These are excellent games that could be improved ever so slightly. They are well worth your cash.
70-79%	A very good game with a few flaws. Games that get a score in this range are still good, but need work.
60-69%	Above average products which need improvement to get a better score.
50-59%	Average products get average reviews.
40-49%	Below average and needs a fair bit of work to make it worthwhile.
Under 40%	The absolute pits.

As you'll have noticed by now, there have been quite a few changes to this issue of *AF*. As it's our 10th birthday we thought we'd have a bit of a new look, but rest assured that you'll still be getting the same top notch, definitive game reviews as usual.

Another thing we've changed is our scoring policy. If they suddenly seem really harsh, take a look at the table on the left which explains what that score means. From now on, 50% will mean a game is average, so if anything gets an *AF* Gold award you can rest assured that it must be a truly great game.

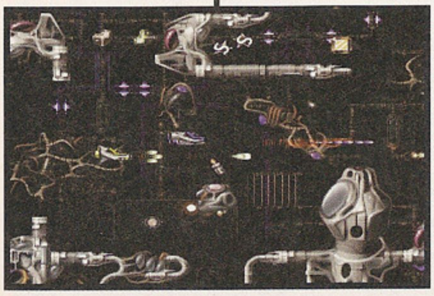
Speaking of which, this month we've got *C&C* clone *Moonbases*, the surprisingly good *Enemy* and the even more surprisingly good *You Only Live Twice*, a James Bond-based four player shoot-em-up that's better than some of the games we've played this year – and it's a Reader Game!

The final change is that I'm leaving this month, although with any luck I'll still be writing this games section – with games like *Napalm*, *Quake* or even *You Only Live Twice*, this job is more fun than ever...



Mark Wheatley





The best upcoming games in Previews.



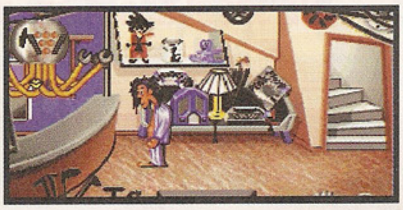
C&C-style planning in Moonbases (above).



Platform romps, fighting and hostage rescuing in Enemy (left).



Game of the month, and it's by an AF reader.





Full Sixth Sense Investigations walkthrough.

Previews






Ben Vost brings you tales off shoot-em-ups, dreams no longer wasted and the latest on sci-fi racer, WipEout...

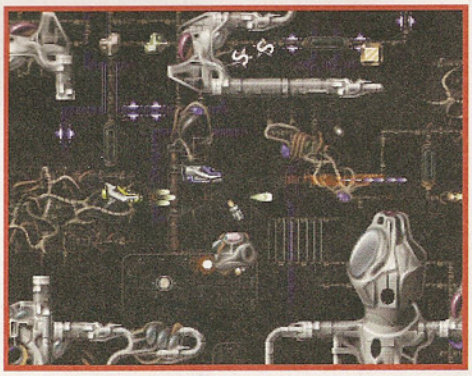




One of the intro screens for T-zerØ.

The time is nearing for *T-zerØ* to be unveiled. We hope there'll be a demo around at the WoA show this month, with a special competition version there to play for clickBOOM prizes at the end of the event. As you can see from these new screenshots, *T-zerØ* is looking more and more like the old skool shoot-em-up to end them all. clickBOOM also have MP3 snippets on their website of the tunes that can be played from the CD while you're busy shooting up the bad guys. There are two tunes and they've gone for a techno and an "arcade theme" feel.

We hope to bring you a review of the complete game in a couple of issues' time. Until then you'll just have to make your own "piaoww!" noises as you gaze lovingly at the pictures...



Our one new shot of the game itself shows how busy the screen can get.

> **As you can see, T-zerØ is looking more and more like the old skool shoot-em-up to end them all...**





clickBOOM's art department must be one of the best on the planet.



WipEout 2097 News

We asked Digital Images how they were getting on with their conversion of the seminal Psygnosis future racer and here's what they had to say.

"Right now we've compiled the game for PowerPC/WarpUp and we have an executable which actually works. The tracks can be played and most effects seem to work fine. The game runs in full-screen mode and also in window mode. We'll also add the possibility to resize the window on the fly, which will certainly be an exciting feature and will show that 'only Amiga makes it possible'.

"Nevertheless, there's still a long way ahead of us. We'll need time to add optimisations to the engine. Right now the whole Amiga version is based on 100% C, which of course makes the game run slower, as if it were optimised using *Assembler* parts. We'll make sure to get as much as possible from the Amiga hardware. Right now there's no sound (neither CD sound nor FX), and the animation playing stuff is in development.

"Additionally, a lot of fine tuning and analysis has to be done to ensure that the graphics quality is as good as it can possibly be."





These are actually shots of the Amiga version running on a PowerPC.

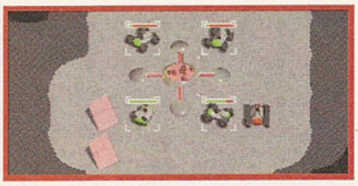
Wasted Dreams at last?

According to publishers Digital Dreams Entertainment, the long-awaited arcade adventure *Wasted Dreams* will be released on June 21st. Digital Dreams bought the rights to publish the game from the previous owners, Vulcan Software, and say that the delays were caused by CD duplication problems. More information is available from their website at http://www.dd-ent.com/

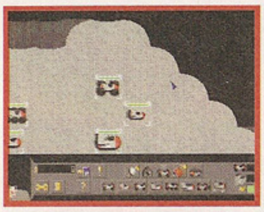


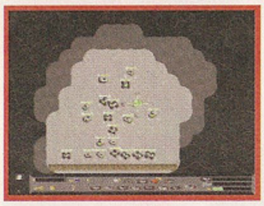
At long last the waiting should be over. We hope to bring you the full review next issue.

Moonbases



It's one small step for mankind, but a giant leap for Ben Vost.





Low Res and High Res games in action.

Moonbases is the latest *C&C*-style real-time strategy game to appear for the Amiga. For those without the wherewithal to run *Napalm*, it might be considered a better game since it runs on our office A1200 with an '030 and 4MB RAM, something that *Napalm* would never do. Its graphics are much more compact and also look much better in Low Res.

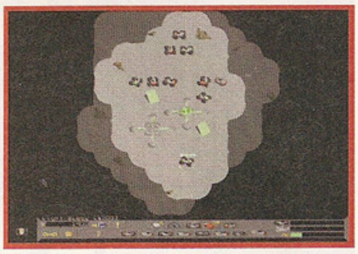
However, the *Moonbases* moniker seems a little inappropriate since there's nothing lunar about the game, other than the dull and unrelenting grey background. The units are so sluggish it's as if they weighed six times what they would on earth rather than six times less, and although pressurisation and airtightness would be my prime concerns for any lunar base, it seems that armour is in this game. The preternatural quality of light on the moon isn't replicated here with, vehicles only able to "see" one unit around them, even the reconnaissance vehicles which are differentiated by the fact that they're slightly faster than the other vehicles and have less armour and firepower.

> "The units are so sluggish it's as if they weighed six times what they would on Earth, rather than six times less..."

Arguably the most important facet to any real-time strategy game has to be the ability of the various units to move to where you point on the screen and to attack effectively once there. Unfortunately, this isn't easy to do in *Moonbases*, with vehicles wandering off all over the place and only being able to attack the largest buildings four at a time, although there's plenty of room at the trough for eight of them.

The units are uninspired and lacking in variety, consisting of wheeled and hovercraft versions of the same light, medium and heavy tanks and a mine layer and mine sweeper pair (of which one is a hover vehicle: one wheeled, natch).

Buildings fare no better. You're limited to a base which is pre-built and positioned for you, a factory, a geological survey building which locates areas of ore for you to mine, a satellite uplink so you can see the whole map, plus a solar panel to get the energy you need to supply the buildings with all the light, heat and air scrubbing they need.

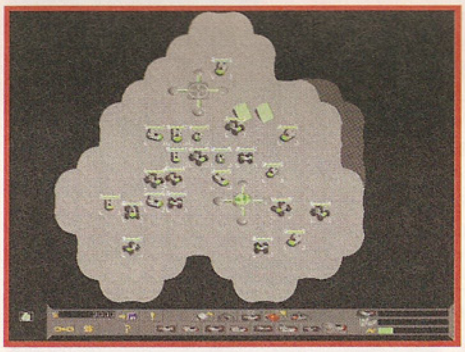


Even in the first scenario you're put right into the thick of things.

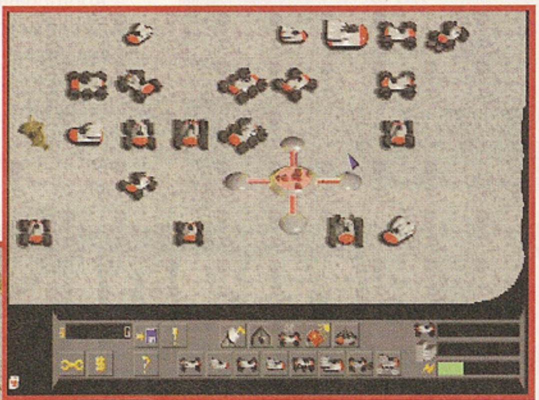
Last bad point. Because of the way the panel is set out you just know that there will be no further development of units or variety of buildings. Sure enough, after having played several very similar missions I was quite disheartened.

On the plus side, however, there are quite a few nice touches. These include the ability to play it in two different resolutions (and on a graphics card), over a serial link (which we were unable to test, but promises to be far more exciting than the single player game) and to edit your own maps to play on.

There's also the matter of its much less stringent requirements than a certain other game we've already mentioned, but then *Moonbases* isn't half as interesting to play either. Perhaps it would be better to save up for a machine that can play the clickBOOM game rather than this one.



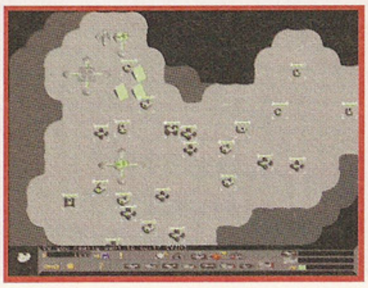
You can drag a box around a number of units to select them.



You can play as one of two sides, either Omicron or Sigma.



Right-clicking on a unit to select it takes some getting used to.



SUPPLIED BY: Alive Mediasoft (01623) 467579
PRICE: £19.99
RELEASE DATE: On sale now
REQUIRES: CD-ROM drive

Pros and Cons

+ Multiplayer mode should be good.
+ Low system requirements.
- Lack of mission variety.
- Lousy manual.

OVERALL VERDICT:
Looks as interesting as it plays.

60%

Enemy Tempest of violence

Enemy mine. Game mine. Leave me alone. Ben Vost over and out.

This is the single most deceptive game I've played this year. It starts out and you think its a cheap *Flashback* rip off. You play for a bit longer and you start getting bored. If you persevere and play for longer yet, you'll get frustrated, and then, finally, you'll actually quite like the sodding thing.

It's such an irritating game. Yes, it is a bit like *Flashback* in that you jump onto platforms and so on, but it's unlike it in the sense that the graphics are crap. While you move with some fluidity while running or jumping horizontally, *Enemy's* vertical jump looks like nothing so much as you simply being picked up and put on a ledge.

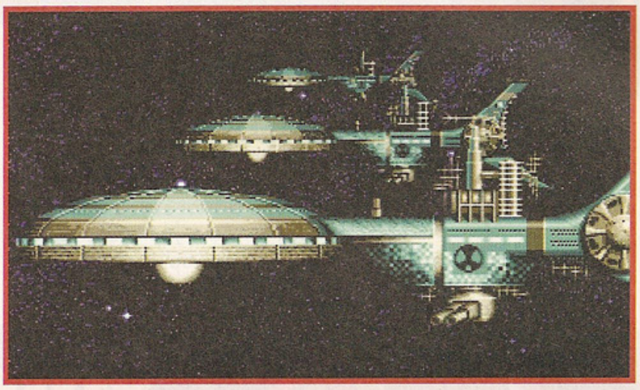
You get bored pretty quickly because there aren't any bad guys to shoot with your very limited ammo on the first two levels (although you'll still need your gun), and you just seem to be running around endlessly. Once you've discovered that you have to get to the exit, things start getting better. You realise you've only got a limited amount of time to complete your task so you start streamlining the way you run through levels to save as much time as possible.

The save points aren't much of a help either – although they save your position up to that point, they don't save how much time you have left, which means that although you can restart from where you left off, you won't have the same amount of time and you probably won't have enough to finish the level.

Right, so you've persevered with the foibles of the game. You've discovered that some of *Enemy's* flip screens actually have help icons on them (hit the Help key and they appear) which might just make a situation you thought was impossible prove to be solvable.

Reading through the full printed manual, it talks about being able to order civilians around, something like *Abe's Oddyssey* on the PlayStation but before that came out, and you get a bit intrigued. You've got your route down pat on level two so that you can drop off medical supplies with the good guys in the shortest time possible, and all of a sudden you notice you're actually quite enjoying the game. Okay, the graphics aren't very eye-catching, the sound's nothing to write home about and the level design can occasionally leave you trapped, forcing a complete restart, but the game itself is actually pretty good.

This is one of those game's where if you don't play it for a day at least as soon as you get it, you won't play it at all. It's not attractive enough to get you playing, it doesn't feature gameplay innovative enough to start off with, but boy is it a grower! When I first saw the manual and it said something along the lines of "turn off your accelerator" I thought that I wasn't going to like it, but by the time I came to have to actually write this review I found that it was really very good.



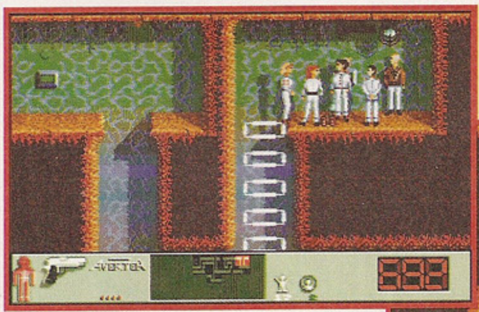




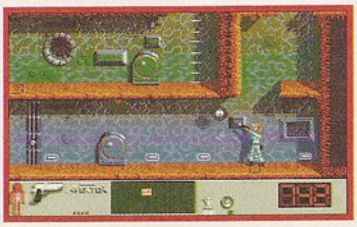
A lengthy intro sequence introduces you to the scenario for the game.

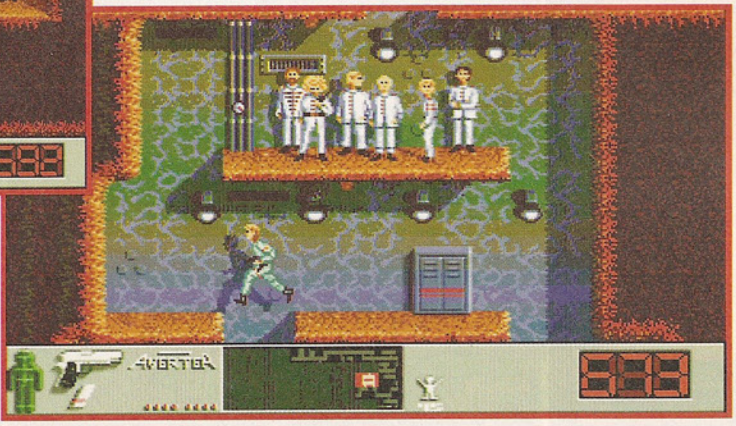


While the levels aren't complex, they do get more involved as time passes.



Getting medicine to trapped scientists is your second task.





While the animation for running and jumping horizontally is pretty good, dropping or jumping up looks really naff.

SUPPLIED BY: Alive Mediasoft (01623) 467579
PRICE: £9.99
RELEASE DATE: out now
REQUIRES: Any Amiga

Pros and Cons

+ Variety in levels.
+ Irritatingly addictive.
- Slow burn gameplay in the extreme.
- Lousy graphics and sound.

OVERALL VERDICT:
Great fun if you give it a chance.

80%

Summer's well and truly here, the sun is shining and it's our birthday! Mark Wheatley celebrates with some top notch…

Reader Games



AFCD42:-ReaderStuff-/-ReaderGames-

ON THIS MONTH'S CD

And we've got some great efforts this month. *You Only Live Twice* is as polished and addictive a multiplayer blaster as you could wish for, *Blox* will have you bouncing balls for so long that you'll be in danger of becoming a recluse and *Legion of Doom*, well, shows a lot of promise.

Which is what we're looking for. We'll take your basic ideas and try to help you to improve them until you've got a really impressive game on your hands. Just to encourage you even more, we offer a £50 prize each issue to the author of the best game. But, well, seeing as it's our birthday and we're all busy quaffing champagne in the sun, we're giving away a rather chunky £100 this month. Read on… hic!



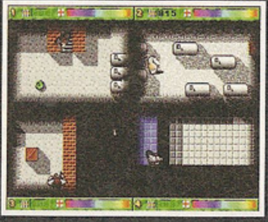
You Only Live Twice



Think of a game in which four players can move round different maps, collecting ammo, first aid and weapons ranging from shotguns to rocket launchers. One person plays the part of James Bond and the others can be chosen from a selection of his enemies and companions. The aim of each player is to kill their opponents as many times as possible, while trying to stay alive themselves, and it's a fantastically good multiplayer romp.

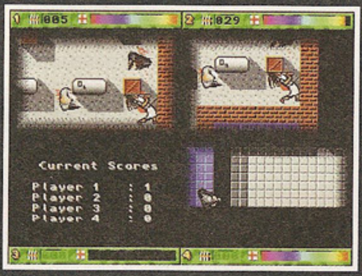


I could be talking about the N64's remarkable *Goldeneye* game, but *You Only Live Twice* offers all the same features and, more importantly, almost equally fantastic gameplay. This can be extensively tailored to suit your preferences, such as how gory you want the deaths to be, the number of players, which character is used, different maps, etc.

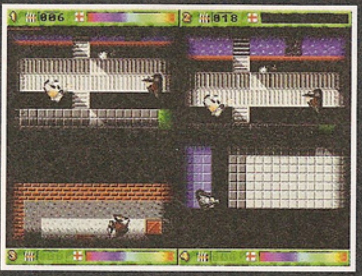


Of course, it can't quite match *Goldeneye*'s graphics and sound, but *YOLT* still looks really nice, from the intro screens to the top-down view of the game map, which becomes increasingly strewn with bodies as each game continues. The sound effects do their job, there are some amusing samples and the James Bond theme is as funky as ever. There are some nice comic touches too – the superbly sampled snippets of dialogue are sometimes wholly inappropriate, the little Blofeld character wanders round holding his white cat, even when firing a bazooka, and the deaths are gloriously gory.

You're all probably waiting for the 'but' at this point. But… there isn't one – this game is better than a lot of full commercial releases. Fair enough, it lacks a single player option, but the fun of the four player deathmatch makes this omission more than forgivable. The only real problem with the game is that, although the disclaimer was included with it, it



The longer you play, the more the screens become littered with bodies.



Blofeld (on the left, holding cat) opens fire on Bond, on the right.



The extensive options allow you to tailor each game to be exactly how you want it.

READER WARRANT

When you're sending in your submissions make sure you also give us:

1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.

The address to send your stuff into is:
Reader Games • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW

Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

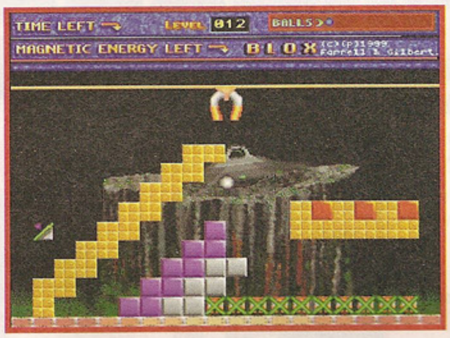
In respect of all material which forms my reader contribution to Future Publishing's *Amiga Format*, I hereby warrant that:-

1. The material is original and does not infringe any other material or rights;
2. The material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
3. That there are no legal claims against the material provided;
4. That I have full power and authority to provide this material to Future Publishing.

Signature: ______________________________

Blox

This game struck fear into my heart when I first saw it as it looked like yet another *Breakout* clone, only upside down. And with a magnet. And blocks which reverse your controls, pierce your ball, freeze your magnet, make the clock run down quicker and more. Hmm, I thought. Maybe there's more to this one than meets the eye. And there is.



The point is to drop your ball onto blocks. A few bounces (depending on the colour of the block) and it will crack and disappear. So far so *Breakout*. You pull back on the joystick to make the ball bounce less and press fire to make the magnet pull the ball back up to the top of the screen. Clear the screen of blocks and you'll go onto the next level.



After a while, the bonus blocks start making the game more and more fiendish. The time limit is set perfectly, making it a real problem if your ball drops onto the blocks which make the time run out even faster. Indestructible blocks are cunningly placed so that it's hard to avoid the spikes which make you lose a life, and all of this really draws you into the game. The learning curve is extremely well judged and makes this really addictive and you'll want to keep playing until you've got through all 50 levels – once you drop, you won't stop. Erm, or something.

The blocks with green crosses freeze your magnet, so avoid them!



Avoid the spikes at all costs as they'll make you lose a ball.

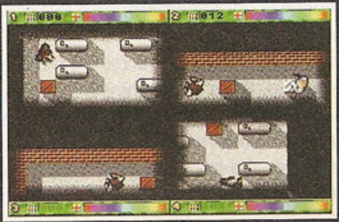
It's a simple idea with enough of a novel twist to make it stand out from all the ball/block games out there, and is a definite improvement over Mark's impressive solo effort, *Fleabyte* (*AF123*). The graphics are simple and it all flows smoothly and works well, without any glitches.

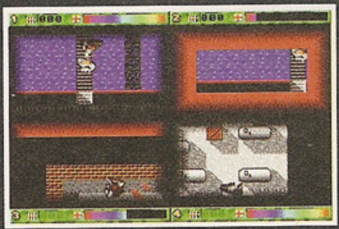
But, as we say all the time here in Reader Games, it's that all-important gameplay that really counts, and that's what sets *Blox* apart.

AUTHOR: Mark Farrell and Sue Gilbert
LANGUAGE: Blitz 2.1
VERDICT: A top notch addictive arcade puzzler. Ball droppingly good.

obviously breaches copyright and so we can't put it on the CD. The samples are great, but obviously taken directly from the films, as are the character images and the music.

All the same, it's so good we just had to award it this month's prize. Perhaps that'll be enough to persuade Andrew to meddle with his code and send us a version that we can put on our CD. He's already shown what a capable coder he is after winning the Reader Game prize back in *AF117* with *Wizards of Odd*, so I'm sure he'll be able to make the changes so you can all get down to some serious blasting.





Blofeld flees over a bridge (above).

AUTHOR: Andrew Crowe
LANGUAGE: Amos Pro 2
VERDICT: An absolutely cracking game – great graphics and sound, lots of options and dangerously addictive.

Legion of Doom



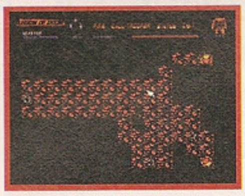
Earth, 2627, September 6th. At 00.01, a demon appears in the centre of Paris, causing mayhem and carnage. At 00.01 each night following that, demons are seen rising from the ground, going on killing sprees in populated areas or joining together to build strange structures in more isolated areas like deserts, jungles or even underwater. The only way to stop them? Send in the Legion of Doom to destroy their base, located underground on Mars.

And that's where you step in. You have 40 troops to lead across 41 levels. You can group your marines into squads of five and must get them through each room, viewed from above. It's all very gloomy with sparse sound effects, giving it a bit of an *Aliens*-esque atmosphere. Which, unfortunately, soon evaporates once you actually start playing.

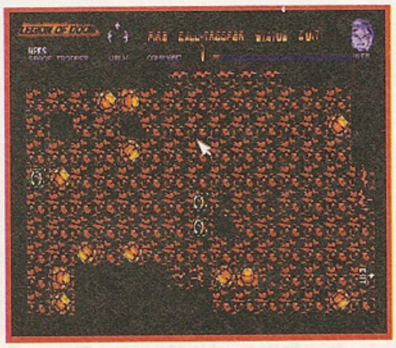
Using the mouse is virtually impossible as it's far too sensitive, so the cursor keys are the only way to get your marines facing the way you want. Getting your first few marines through is easy, the level being uncovered as you explore. After a while though, there are demons all over the place and the stop-start movement and effort of moving marines just becomes a hassle. Grouping the marines isn't particularly effective and certainly doesn't seem to speed up the gameplay.



After numerous attempts, no-one on the *AF* team managed to get past the first level, either giving up in boredom or being told we'd failed, presumably because of a time limit. I take it that we're missing out on some essential gameplay point here Eric, so please write in and let us know what we should be doing! The game certainly has a lot of potential, and after a few tweaks to make it more user-friendly, it could well be a contender for the game of the month prize. At the moment, however, it's just worth remembering that in space no-one can hear you yawn. AF



Move round the level to the exit, blasting the demons. We've no idea what level 2 looks like...



Get your marines to the exit at the bottom right of the screen

AUTHOR: Eric Park
LANGUAGE: Amos 1.34
VERDICT: Has its good points, but is far too frustrating, dull and slooooooooooow.

GAMEBUSTERS!

Sixth Sense Investigations

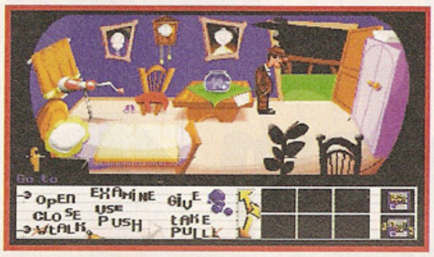
FULL



SOLUTION

PART 1

Stuck in a world of lovesick robots, mad cheesemongers and ghostly detectives? Don't worry – Mark Wheatley explains exactly what to do...



The start of the game (above). It gets very surreal from here on in.

Sixth Sense Investigations scored a very healthy 82% when we reviewed it back in *AF116*, and deservedly so. It's a paranormal adventure romp in the style of *Monkey Island* that has you arguing with camels, talking to rats and doing





Use the map (top) to go to the American Cheesers shop (above). Pick up the crumbs.

other things that are equally peculiar. Perhaps these things were too peculiar for you to work out, so we've got a full walkthrough of the game starting in this issue to help you.

Okay. You start in your bedroom so open the door and walk into the hallway. When you get downstairs the phone will be ringing so answer it.

The call is from a Mr. O' Cheese, so after agreeing to take the case and chatting to Ben, your assistant, open the cupboard door, take the glass and the beermats and then go through the front door to the map.

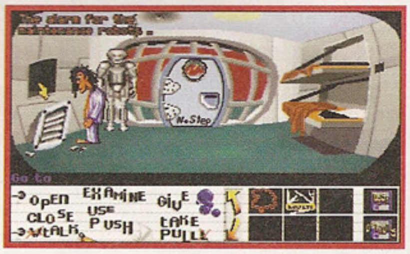
From the map screen, head to the American Cheesers building. Once inside, pick up the cheese crumbs. They're quite tricky to find, but they're just in front of the counter, on the floor. Talk to Mr. O' Cheese, who's stuck under a massive cheese, and then go to the cupboard at the back of the room. Open the cupboard and take the metal bar. Go back to the counter and use the bar with the fragment of stone. This will sharpen the bar, so use the sharp bar with the huge cheese trapping Mr. O' Cheese.

This will free him, but be warned, he won't be happy that you destroyed his cheese, calling you a murderer and generally complaining about your wanton destruction of fine dairy products. Ignore him and take the robot arm on the floor and leave the cheese shop.

The plot thickens...

From the map, head to Toys N Us. You'll find it in a bit of a mess, but among the debris and toys on the





Frank (top) in the Doc's laboratory, and Ben (above) in a prison in Robopoly.

floor you'll find a hammer and a tennis ball. Pick them up. Also pick up the towel that's lying on the box in front of the office. If you want to talk to Arnold, the chap in the toy store, he'll ramble on about ghosts, explosions and robots.

Leave the toy store and head for the garage. Using the towel, pick up the battery you'll find there and take it back to the toy store. Go to the fork lift truck, open the bonnet and use the battery with the engine. Now push the lever which will lower the forks. This will enable you to pick up the medallion that was out of reach.

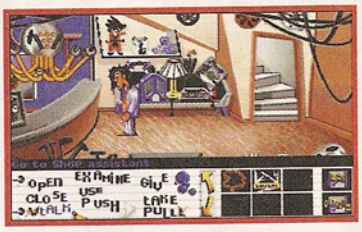
Take the medallion, leave the toy shop and go to the laboratory. After

> He calls you a murderer and generally complains about your wanton destruction of fine dairy products.





Toys N Us is a bit of a mess. Pick up the bits and bobs and tinker with the fork lift.





Get goodies from the pawn shop (above left) and oil from Pub Lube (above right).



Barnie the cab driver is yet another lovesick robot...

listening to the doctor there telling jokes and talking about his translator machine, give him the medallion and the robot arm. He promises to examine them if you give him some time, so leave the store and then re-enter. Talk to the doctor and ask him about the medallion.

Once he's explained all about jumping to other dimensions, ask him about the robot arm. He'll tell you it's of alien origin, so leave and go to the map. The scene will now jump to Ben, imprisoned in a robotic jail...

Robopoly

Talk to Ralph, the guard robot, and ask him how he's doing. When he says 'bad', ask him why. He'll reply that he's lovesick, so ask with who and he'll tell you, oddly enough, that he's in love with a games console.

Ask what the problem is and he'll start complaining that he's in psychic contact with her and that she's suffering. Ask why she's suffering, and after listening to a tale of a rich kid overplaying her day and night, playing lowbrow games, ask who this kid is. When he says Charles Goldenhouer, it's time to get down to business so say you need to escape.

Ralph will give you a knife, so use this with the ventilation grill and crawl through the ventilation shaft. Once outside, head for Walkstreet. Go to the pawn shop and give your wooden necklace to the hovering octopus-like robot salesman. He'll give you loads of credits in return, so ignore the tempting Pink Floyd album and take the old can, the Zwatch and the leg and trunk armour. Leave the shop, go back to Walkstreet and head for the Palace.

Use the can with the refuse chute on your left, behind the soldier robot. Fill it with oil and examine the can – you'll find a lever in it. Take the lever and head back to Walkstreet.

Open the door to Pub Lube and go in. Go up to the drunk robot sitting alone and sneakily use your can with his pure oil. Take this pure oil to Howard, the robot sitting outside on the street, and ask him how he is. He'll say he needs a drink, so ask him what of. He'll say oil, of course, so ask how much he'd give you for your oil.

Howard then offers you a map of Robopoly for it, which you should take. However, you won't know how to use it, so give it back to Howard and he'll explain it to you.

Doctor Walt

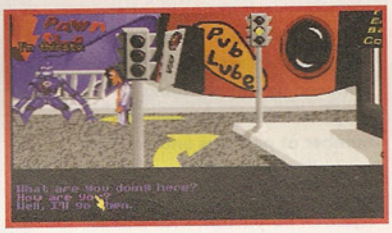
Look at the map and head for the doctor's surgery, which is one of the marked buildings. Talk to Doctor Walt. Tell him you need help, then listen to his whinging. Say you really need help, and after he's finished whinging again, tell him you need to get into your armour. He'll complain about his arthritis and his back, so ask what you should do as you'll need to prepare for the operation yourself.

In the far left corner of the room are three levers. Push the lever on the bottom left first. Then use the lever above that one, and finally use the one to the right of those two. Walk over to the winch and you'll find a shaft on the wall. Use the lever which you found in the can of oil with the shaft. Push that lever and the winch will lower, so tell Doctor Walt that you're now ready for the operation.

Once you're all suited up, leave and head back to Walkstreet. Talk to Barnie, the robot standing next to the cab. He won't take you anywhere until you give him the Zwatch, which he needs to use to impress his girlfriend's father. Now give him the Robopoly map. Barnie says he can take you anywhere, so head for the Sixth Sense Investigations office.

> **You'll have a long chat with the ghost of Arthur, who'll advise you that the best way to leave is to commit suicide.**

Once there, you'll have a long chat with the ghost of Arthur, who'll advise you that the best way to leave this dimension is to commit suicide. However, you'll argue that he should go and give a message to Frank and explain what's going on, and that Frank needs to steal Charles Goldenhouer's games console and send it to the robot dimension. Arthur agrees and leaves. You can potter about the Sixth Sense office if you want, but leaving will cut back to Earth, giving you control of Frank in the laboratory.



Howard the robot, outside Pub Lube and the pawn shop. Give him some oil.

Arthur's ghost appears and tells you about the console you need to steal and send to Ben, and that you need to rescue Ben from the robot dimension. All in a day's work really...

We'll continue investigating next month, where you'll find some intriguing and original uses for tyres, hot cheese and a mouse in a glass. AF



You'll have to put up with a lot of whinging from Doctor Walt before he'll help.





SEND US YOUR TIPS!



If you've got some hints, cheats, tips or general good advice on any Amiga games – especially some of the newer ones like Napalm, Hexen, Heretic and Quake,

Also, if you've got a query about a game (and no, we don't really mind people asking about The Secret of Monkey Island, then drop us a line and we might be able to answer it in Helping Hands.

HELPING HANDS • Amiga Format 30 Monmouth Street • Bath • BA1 2BW



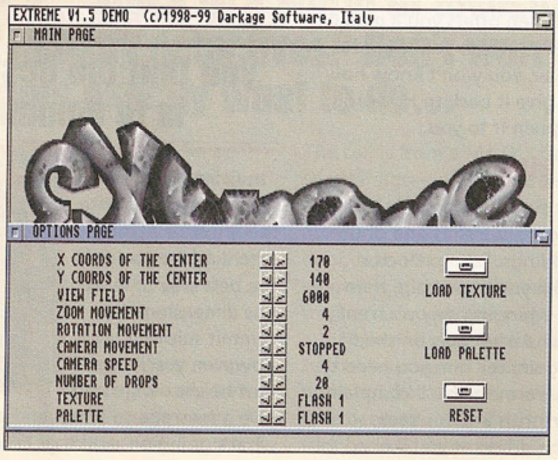
PD Select

Richard Drummond gives you the low-down on what's new and interesting in the Amiga freeware and shareware scene.

Extreme Demo v1.50

Extreme is a real-time effects processor for desktop video work. It generates those swirly plasma effects that are so common in demos. These can be used as backgrounds for titling and so on.

***Extreme* features eight different effects, such as Tunnel, Sphere and Wave. The effects are achieved by transforming a supplied bitmap pattern, and a number of patterns and palettes are built into the package. The full version allows the loading of external IFF pattern files and palettes but this demo does not. Configuration of the various effects is achieved through a simple GUI.**



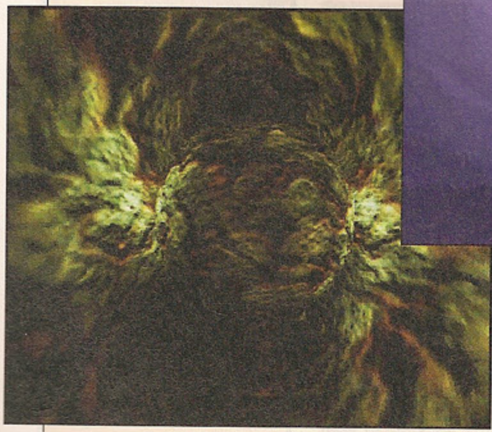
Spruce up your video titling work with some fancy plasma-effect backgrounds courtesy of *Extreme*.

The documentation for *Extreme* is non-existent, but online help has been provided. Although the interface may be opened in the screenmode of your choice, whichever mode you choose, the size is restricted to 640x256.

The GUI allows you to tweak parameters such as "camera" movement and speed, rotation speed, etc. Other options include the use of PAL or NTSC video modes in both normal and interlaced resolutions, plus the ability to synchronise with a genlock. You're supposed to be able to save out generated effects frame-by-frame as IFF files but the package doesn't tell you how to do this; it's probably disabled in the demo version.

***Extreme* is an interesting piece of software. It does its job competently, but will probably only be of interest to the specialist Amiga user.**

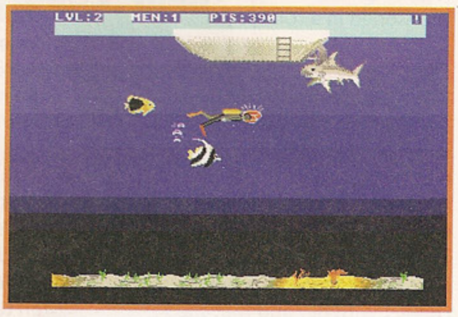




No, it's not a hangover in progress, it's an example of *Extreme*'s effects.

BY: Darkage Software
WARE: Shareware
SIZE: 254K
FROM AMINET: biz/dkg/ExtremeDemo.lha
REQUIRES: AGA Amiga

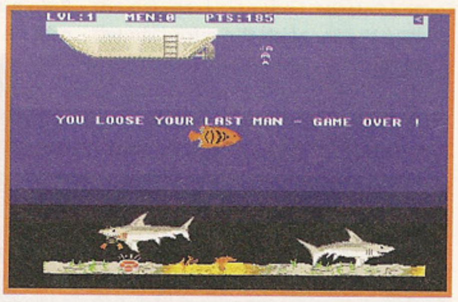
Sharks



Your role in *Sharks* is that of a scuba diver whose task it is to retrieve treasure from the seabed and return it to your boat. As always, things are not so easy as they would appear, and you're hampered in your objective by the local population of marauding sharks.

Sharks looks as though it has fallen through a timewarp from the mid '80s. What with its third-person perspective scrolling viewpoint, blocky graphics, jerky animation and pretty crude sound effects, you'd be forgiven for thinking that it was an eight-bit game being run under emulation.

It's refreshing to see a gaming idea more novel than the usual *Breakout* and *Tetris* clones, but unfortunately *Sharks* is about as exciting as watching a fish tank with all the fish removed. If your doctor has ordered you to relax more, give it a try.



Chomped by a shark. What a nasty way to go!

BY: Christian Steiner
WARE: Shareware
FROM: Classic Amiga
DISKS: 1
PRICE: £1 (+50p P&P)

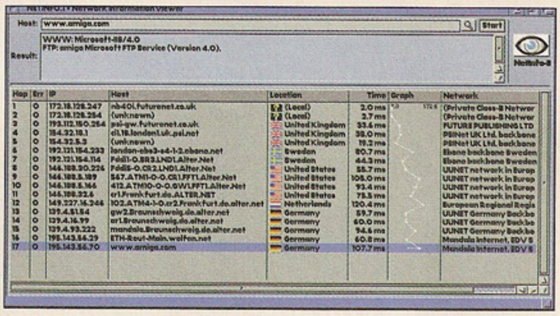
NetInfo II

The original *NetInfo* forms part of the *NetConnect 2* Internet software package and is probably the least used component of the suite. The aim of *NetInfo* is to provide a graphical interface to network information functions such as ping, traceroute, finger, etc.

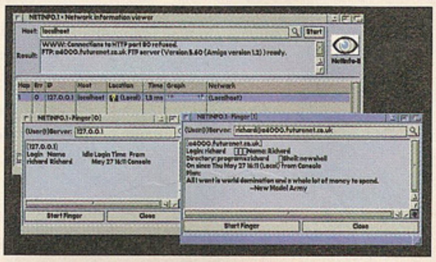
The latest incarnation, *NetInfo II*, provides a similar functionality to the original but with a vastly improved interface. Instead of the terminal-like display of its predecessor, *NetInfo II*'s main window is a table. To trace the route to a host, you enter its name or IP address in the string gadget and hit return. Each 'hop' of the route will be displayed in a separate line of the table with information on the address, name and location of the host, and the time taken for the hop.

Clicking on any line will perform a WHOIS request on a host to provide more detailed information. The destination host is automatically scanned for the existence of a HTTP or FTP server. Fingering of hosts may be achieved from a menu option and the results displayed in a separate window. *NetInfo II* also integrates well with a web browser (*Voyager* by default). You may double-click on any URLs displayed by the program to view web pages or send mail.

The improved interface of *NetInfo II* makes the program a lot clearer to use but makes the external use of retrieved information more difficult. No export options are provided and cutting and pasting with the mouse is less flexible since you can only grab one table line at a time. Two useful features from the original are missing, too: a simple ping function and full service reporting on queried hosts. The authors say that these omissions will be addressed in a future update.

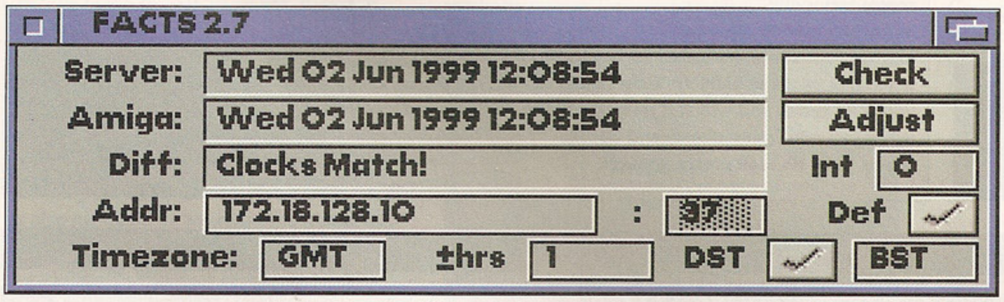


NetInfo is a great tool for finding out what's really happening under the Internet's bonnet.



BY: Vaporware
WARE: Shareware
FROM AMINET: comm/tcp/netinfo.lha
SIZE: 236K
REQUIRES: *MUI*, TCP stack

FACTS 2.7



Never commit another temporal *faux pas* – let *FACTS* look after your Amiga's clock.

Those of you who have been taking part in the afb mailing list recently will probably have noticed the thread discussing the problems of ensuring that your Amiga's internal clock and time zone are set correctly. Unfortunately, there's no easy way to do this as standard. Well, fret no more because *FACTS* is a tool to automatically take care of everything for you.

FACTS, which rather boldly stands for *Finest Amiga Clock Time Synchroniser*, works by retrieving the current time from an NTP (Network Time Protocol) or daytime server, the Internet's equivalents of the speaking clock. All you have to do is set which time zone you live in and *FACTS* will ensure that your clock is always correct. It can automatically take care of Daylight Savings Time and can even cope with year 2000 issues and other clock overflow problems. *FACTS* can also emulate the functionality of the program *SummerTime Guard* so that software which uses its facilities, like *YAM*, can work with *FACTS* instead.

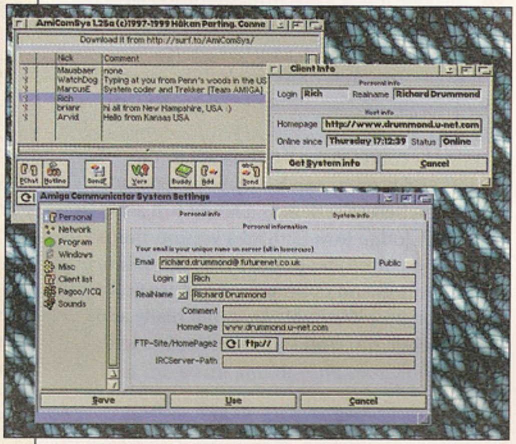
FACTS is controlled by an easy-to-use GUI. Just install the thing into your WBStartUp drawer, configure it and forget about it. You'll never again receive emails from indignant netizens telling you to fix your time settings.

BY: Chris Young
WARE: Freeware
FROM AMINET: comm/tcp/facts.lha
SIZE: 50K
REQUIRES: TCP stack

AMarquee

Amiga TCP/IP stacks such as *Genesis* and *Miami* provide a shared library called bsdsocket.library to allow software to access communications functions. This library is based on a UNIX API. While this is handy when it comes to porting software to the Amiga, it doesn't really fit too well into the Amiga programming idiom. Also, the library's functions are rather low level and so a lot of work is required to furnish your programs with TCP functionality.

A solution to these problems is afforded by the *AMarquee* system. *AMarquee* employs a client-server model and consists of two main parts: a shared library and an Internet daemon. The library sets up a background process for each client program which takes care of all the socket transmissions. The daemon provides the server functions, possibly on a remote machine. All network communication is made via a standard exec message port and messages, therefore making integration of networking functions into your program much easier.



This is *AmiComSys*, a particularly useful application of *AMarquee*.

Installation of *AMarquee* is simple with the standard installer script provided. It even takes care of configuring your particular TCP stack for the *AMarquee* daemon. A wide selection of (mostly trivial) example clients and source code is supplied. The documentation provided is helpful for both the user and developer.

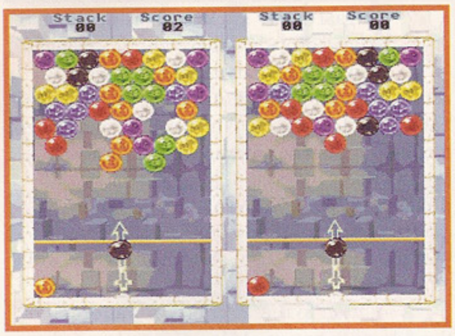
The only problem with *AMarquee* is the lack of application software to show off its capabilities. The one exception to this is the *ICQ*-type client *AmiComSys* (available from the Aminet at comm/net/AmiComSys.lha). This is a tool which allows you to chat to any other Amiga users who are currently logged in and using the system.

AMarquee is an excellent and well-executed concept. It could potentially become the standard for Amiga networking for games in a similar way that *rtgmaster.library* is becoming a standard for graphics.

BY: Håkan Parting & Jeremy Friesner
WARE: Donationware
FROM AMINET: comm/net/AMarquee49.lha
SIZE: 271K
REQUIRES: TCP stack

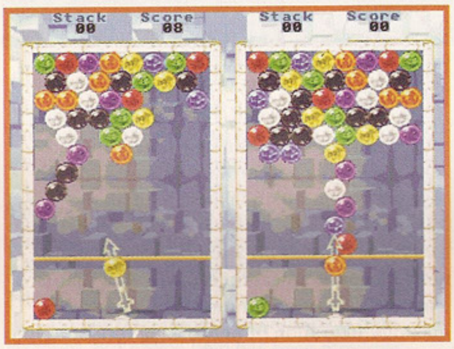
Continued overleaf ➡

Bobble Puzzle



No prizes for guessing that this is a clone of *Puzzle Bobble*. For those who missed the original, it's sort of an upside down version of *Tetris*. You must fire bobbles towards the top of the screen and attempt to group bobbles of the same colour together. Once three or more become adjacent, they fall to the ground and are removed. Any bobbles that aren't attached to others as a result will also fall.

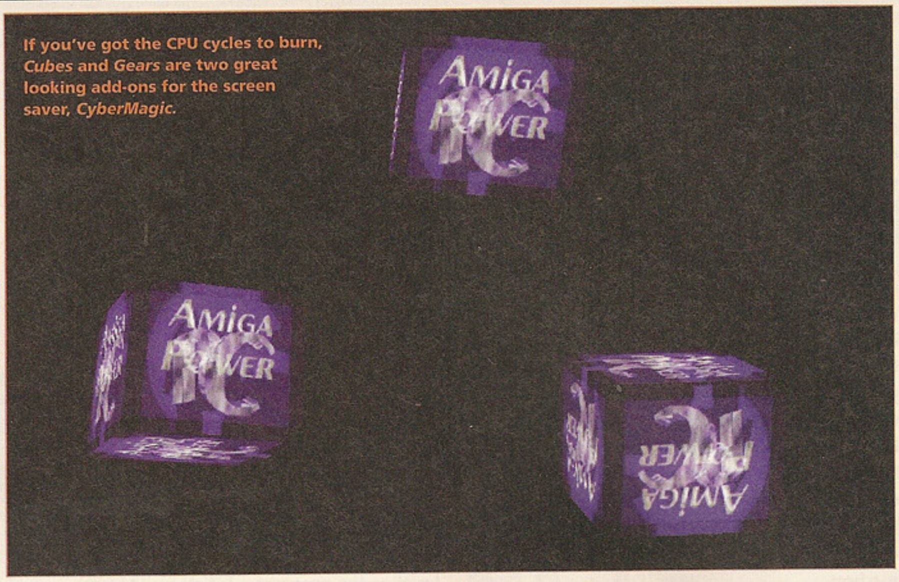
I can't judge how faithful a version this is, not having played the original, but it's colourful, well presented and definitely one-more-go-ish. The simultaneous two-player game really adds to the challenge too, and so *Bobble Puzzle* is well worth a look.



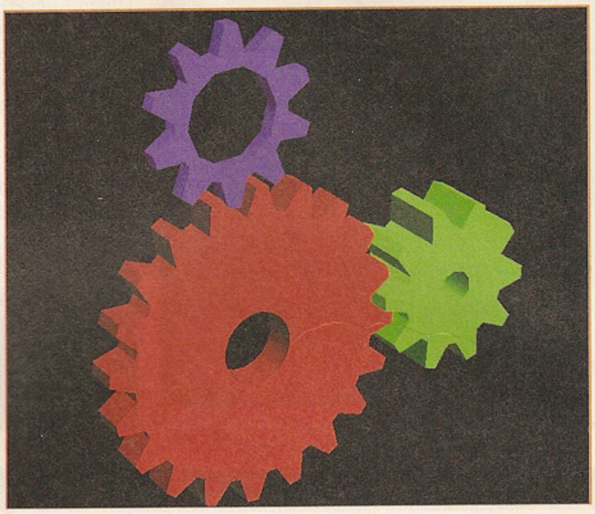
It's a puzzle and it's got bobbles: it's *Bobble Puzzle*.

BY: Benoist Jesahel
WARE: Freeware
FROM: Classic Amiga
DISKS: 1
PRICE: £1 (+50p P&P)

CyberMagic Modules



If you've got the CPU cycles to burn, *Cubes* and *Gears* are two great looking add-ons for the screen saver, *CyberMagic*.



Screen blankers: you either love them or hate them. If you belong to the first school of thought and own a *CyberGraphX*-compatible graphics card, you may have already tried *CyberMagic* (gfx/board/cybermagic.lha), a modular screen blanking utility designed especially for higher spec machines.

Three new modules are now available for use with the *CyberMagic* system, the two most interesting being *Gears* and *Cubes*. Both of these two stretch the concept of a screensaver to its limit since they generate computationally-intensive *OpenGL* 3D animations. Unless your machine has some dedicated 3D hardware, when one of these blankers kicks in it'll sap all your CPU cycles and will still only be able to manage a one-frame-per-second update speed. They do look pretty, though.

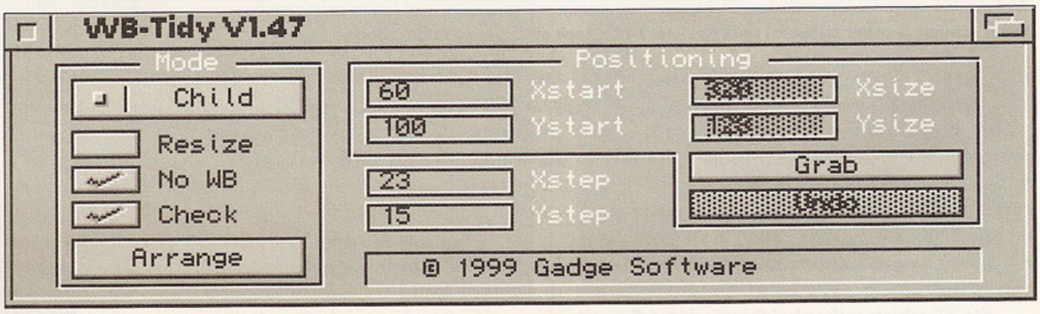
BY: Markus Killian
WARE: Freeware
FROM AMINET: util/blank/Cube.lha
SIZE: 97K
FROM AMINET: util/blank/Gears.lha
SIZE: 37K
REQUIRES: *CyberMagic, StormMesa 3.0*

WB-Tidy 1.47

As its name probably suggests, *WB-Tidy* is a tool for keeping your Workbench screen, erm, tidy. It allows you to re-arrange the positions and sizes of all the windows into one of four formations: tiled, stack, cascade or child. This is actually a lot more useful than it sounds, but it's rather complicated to describe. Just take my word for it.

WB-Tidy's functions may only be accessed via its window. The mode of arrangement is selected via a cycle gadget and another gadget must be clicked to start the shuffle. *WB-Tidy* isn't a system commodity and doesn't support hotkey activation. If your screen is in a mess, you don't really want to have to find the *WB-Tidy* window first to then be able to clear it up. Another limitation is that it re-orders all of the windows on the screen. It would be nice to have more control over which windows it re-arranges, say by pattern matching on the windows' titles or owning tasks.

WB-Tidy is a great idea but needs some work before its becomes truly useful.



WB-Tidy can manage the clutter on your virtual desktop.

BY: Geoffrey Whaite
WARE: Freeware
FROM AMINET: game/think/MUIMine.lha
SIZE: 154K
REQUIRES: *MUI*

ONLINE UPDATE

For those of you who appreciate UNIX humour, there have been a couple of uploads to the Aminet that you may find amusing. The Hacker Jargon file (at docs/hyper/jarg412.lha) attempts to give a compendium of jargon and slang used by hackers, and to explain the convoluted hacker ethos. It's a real must if you want to be able to communicate with such creatures or, indeed, if you want to be able to spot the tell-tale signs and avoid becoming one yourself. Also, The Day SunOS Died (docs/hyper/TheDaySunDied.lha) is the lyrics to a song with the tune of certain Don MacLean ditty which laments the standardisation of UNIX.

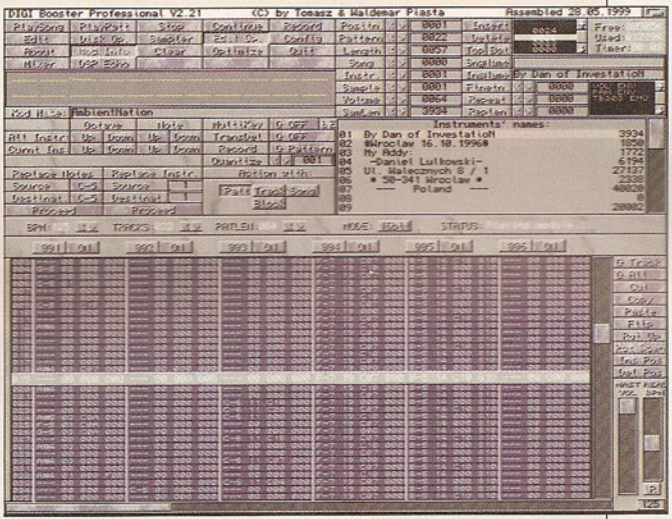
On a more serious note, in the last issue we reviewed the Multitaskers' WYSIWYG HTML editor, *MetalWeb*. This is a potentially useful system for easing the creation of web pages, but was originally shipped without documentation. English instructions can now be found at the authors' website: http://personal.redestb.es/multitaskers/. Hopefully this will make the program more usable.

Two issues ago we discussed *RXSocket*, the shared library which gives the ARexx programmer access to TCP socket functions. Yet another update to this powerful system has appeared on the Aminet at comm/tcp/rxsocket.lha. In version 9.5, *RXSocket*'s functionality has been split into two libraries – all the functions which handle general networking and user functions have been separated off. The core library now handles only the core socket API.

And finally, if like me you're aficionados of dinosaur '70s rock bands, you'll probably feel that the selection of music modules that are uploaded to the Aminet don't cater particularly well for your own musical tastes. Well, make sure you have a listen to *'70s Dream* by Maurizio Corda (mods/rock/XM70S.lzh). It's quite a sophisticated attempt at a typical prog rock epic, although I think it would be a whole lot better if it were accompanied by some ear-piercing vocals.

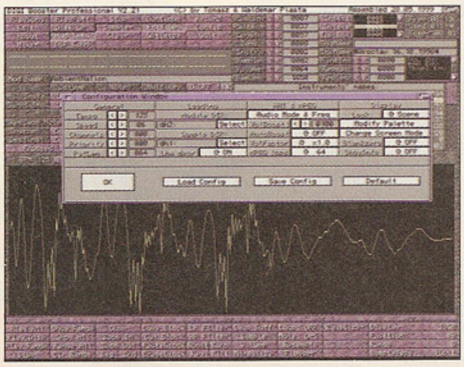
DigiBooster Professional v2.21

Software for composing music on your Amiga has come a long way from the humble *SoundTracker*. Gone are the days of hardware-hogging programs restricted to four channels of 8-bit Paula sound. *DigiBooster* is a modernisation on the tracker theme. It's system friendly, runs in the screenmode of your choice and generates sound purely via the *AHI* retargetable audio system. It's therefore compatible with any *AHI*-supported soundcard, and so users with such systems can benefit from higher fidelity playback of samples.



DigiBooster is a high quality and system-friendly tracker clone.

DigiBooster is packed with other features too. It can import and export songs in various formats, such as as *XM*, *OctaMED*, *Octalyzer*, etc, as well as using its own custom format. The instrument editor is powerful, supporting 8-bit and 16-bit samples in a variety of formats, including MP3 encoding. Each instrument may optionally have a volume envelope and a panning envelope defined. A TB303 emulator is also included, as are real-time global DSP effects in software.



Since the output is produced via *AHI*, there's only one (stereo) logical channel. The multiple channels in your music are mixed by the CPU, hence the number of channels (up to a maximum of 128) and the output frequency are limited by the processor power of your machine. A graphics card and a soundcard will help to take the strain off your system, though. Future versions will support PowerPC plug-ins and the forthcoming PPC release of *AHI*. Also planned is support for hardware DSPs such as the one provided by the Delfina card.

Despite all this evolution, *DigiBooster Pro*'s interface hasn't thrown off the shackles of its tracker heritage. While the screenmode is configurable, the width is fixed, as is the font. The GUI follows the usual trend of packing as much information into as small a space as possible. This will be familiar to those who have grown up using tracker programs, but it's probably a little off-putting for the novice. The documentation is also rather brief and assumes you already know how to use software of this type.

DigiBooster Pro is shareware and this restricted demo doesn't allow you to save songs or instruments. The registration fee is $30, a price this product nonetheless merits.

BY: Tomasz Piasta and Waldemar Piasta
WARE: Shareware
FROM AMINET: mus/edit/DBPro221.lha
SIZE: 495K
REQUIRES: *AHI*

Savage Installer v0.8 beta

Commodore really did the Amiga world a favour when they created the *Installer*. It provides developers with a flexible and reliable way of ensuring their software gets installed properly and provides users with a consistent and familiar interface. The trouble is that this interface is a bit long in the tooth and doesn't even comply to Commodore's own interface style guide. *Savage Installer* is a project to create a compatible but improved installation tool which addresses some of the original's shortcomings.

This beta release of *Savage Installer* uses *MUI* for its user interface. This is merely a tool to speed development and the final version will use custom *BOOPSI* classes instead. It supports the same *LISP*-like language as the original, but by default is a lot fussier in interpreting it.

Typical install scripts, written with the laxer Commodore *Installer* in mind, produce lots of syntax errors. An option called *LazyCompile* is provided to emulate the original's behaviour, but it still failed over half the scripts I tested.

There is a host of additions to the language, including features from *CLOS* (an object-oriented version of *LISP*) and the ability to skip back to a previous section. This last feature is extremely handy since it allows users to change their mind about selecting options, without having to quit a script and re-execute it. Apparently a similar feature will be included in Haage and Partner's *OS3.5 Installer*.

Savage Installer is a potentially useful and interesting product. At the moment, however, it falls over on far too many install scripts to offer a real alternative to the official installer.

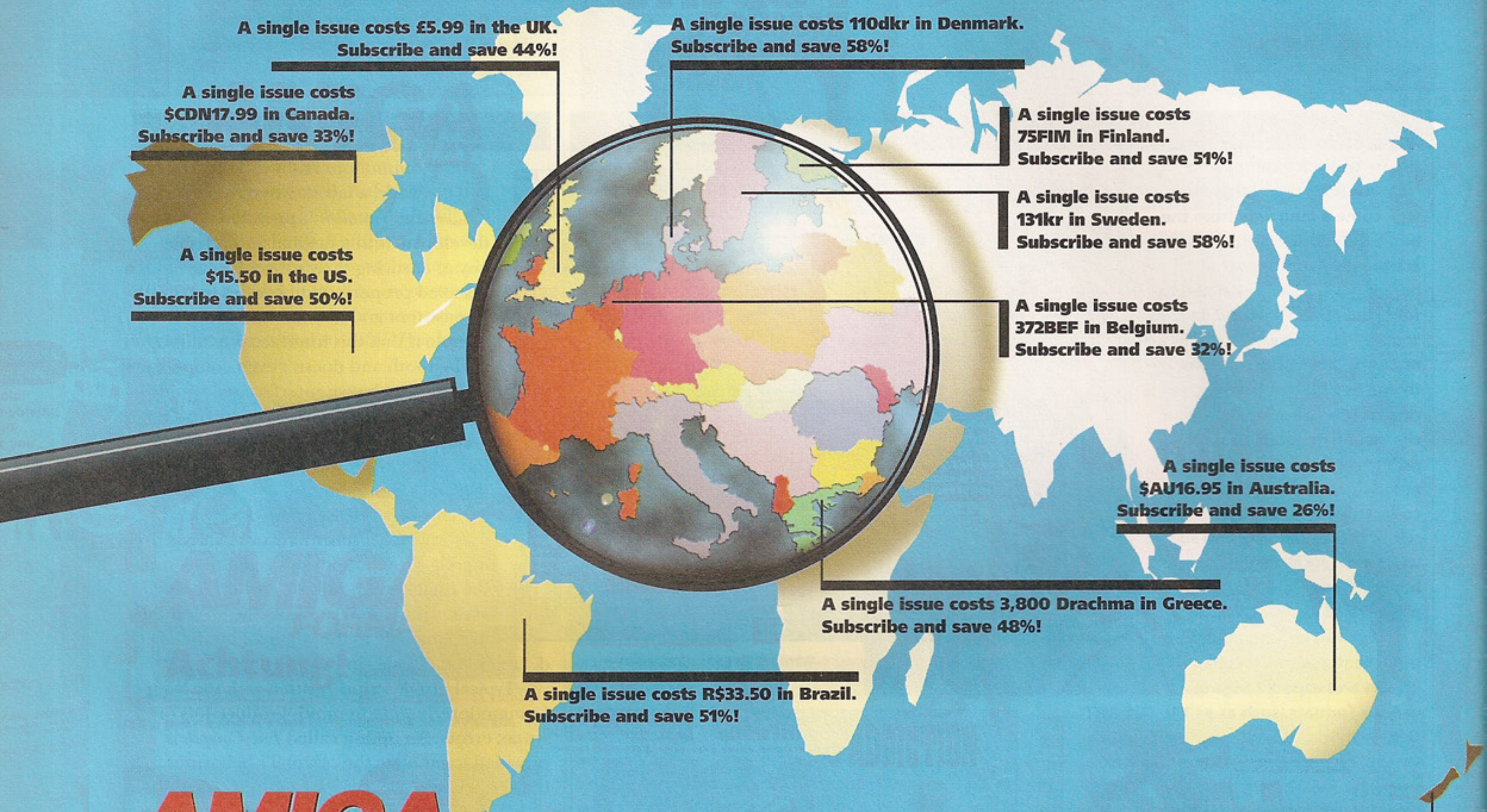
BY: Jens Tröger
WARE: Freeware
FROM AMINET: util/sys/SavInstaller.lha
SIZE: 212K
REQUIRES: *MUI*

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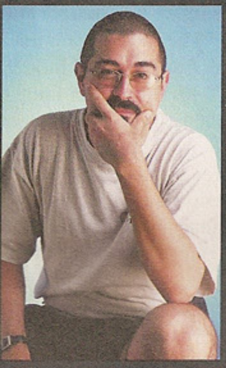
...is very simple. ***Amiga Format*** is written by nearly all of the most experienced Amiga users in the world and what we say goes. OK?

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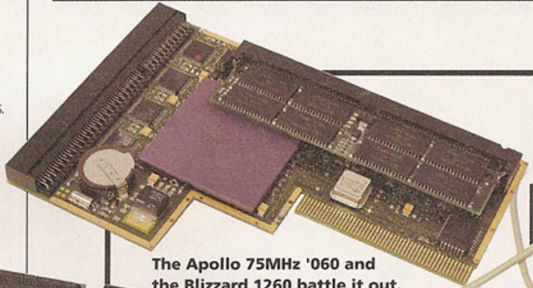
90+%	These products are absolutely top notch. They are hard to find any fault with and that's the reason they get an *AF Gold* award.
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70-79%	A very good product with a few flaws. Items that get a score in this range are still good, but need work.
60-69%	Above average products which need improvement to get a better score.
50-59%	Average products get average reviews.
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Under 40%	The absolute pits.

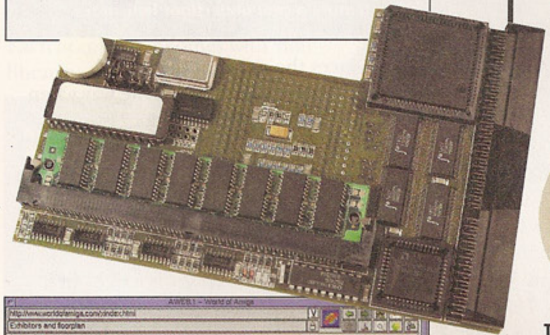
Take a note of our reviews policy. While it's nice to be able to say that you've only ever bought products based on the fact that they've received scores of 90%+ in the magazine, it has to be said that at one point in *AF*'s past we could have been accused of artificially scoring products highly. Everyone was doing it – we were supporting the Amiga market and so on. Well, it's my opinion that you would do better with real scoring for real products and be able to rely on what you read in *Amiga Format* as being the truth. We've been really pinning down the scores we give products and checking among ourselves that such-and-such a product really deserves 72% instead of 73%, and that the Format Gold logo is really deserved by a particular product. We're impartial and we work hard to bring you the truth about the products in the Amiga market as best we can.

Anyway, now I've got that off my chest, have a read of the following pages bearing our scoring policy in mind, and then think about whether you'd be happy to have those 70% and 80%-scored products.

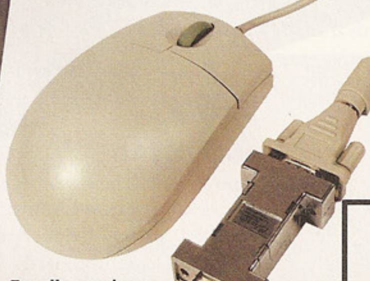


Ben Vost

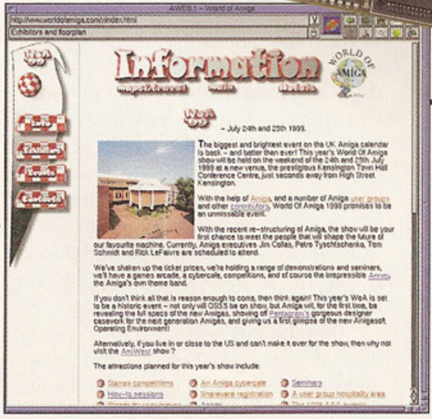




The Apollo 75MHz '060 and the Blizzard 1260 battle it out.

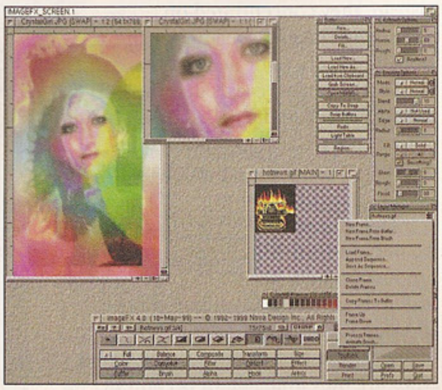


Topolino makes a PC mouse more compatible.



We line up the three main web browsers for a shoot out in our Head-2-Head review.





Kermit Woodall himself runs us through the latest version of *ImageFX*.

Apollo 68060LC/75

Top of the class – Simon Goodwin races two of the fastest A1200s around.

Eyetech have just introduced Amiga accelerators with the highest 68K clock speed ever seen. Their new Apollo 68060 accelerators are clocked at 75MHz, making them capable of over 200 million instructions per second, with a following wind. What's more, the new boards aren't overclocked – the chips are rated by Motorola at that speed.

The fly in the ointment is that the processor is an LC model, similar to the LC040s shipped in some Commodore A4000s and budget PowerPC expansion. Motorola make 68040s and 68060s in three grades: EC, LC and XC. The EC version is integer only, lacking memory management (MMU) hardware. The LC models have the MMU but no hardware floating point unit (FPU). Only the XC version includes both.

With phase 5 pinning all their hopes on PowerPCs, Power Computing and partners DCE have snapped up the rights to Wolf's well-respected 68K Amiga accelerators. This gives *Amiga Format* the chance to compare the latest Apollo with the fully-loaded Blizzard accelerator, boasting floating point maths hardware and a SCSI controller with direct access to the local fast memory.

LC PEDIGREE

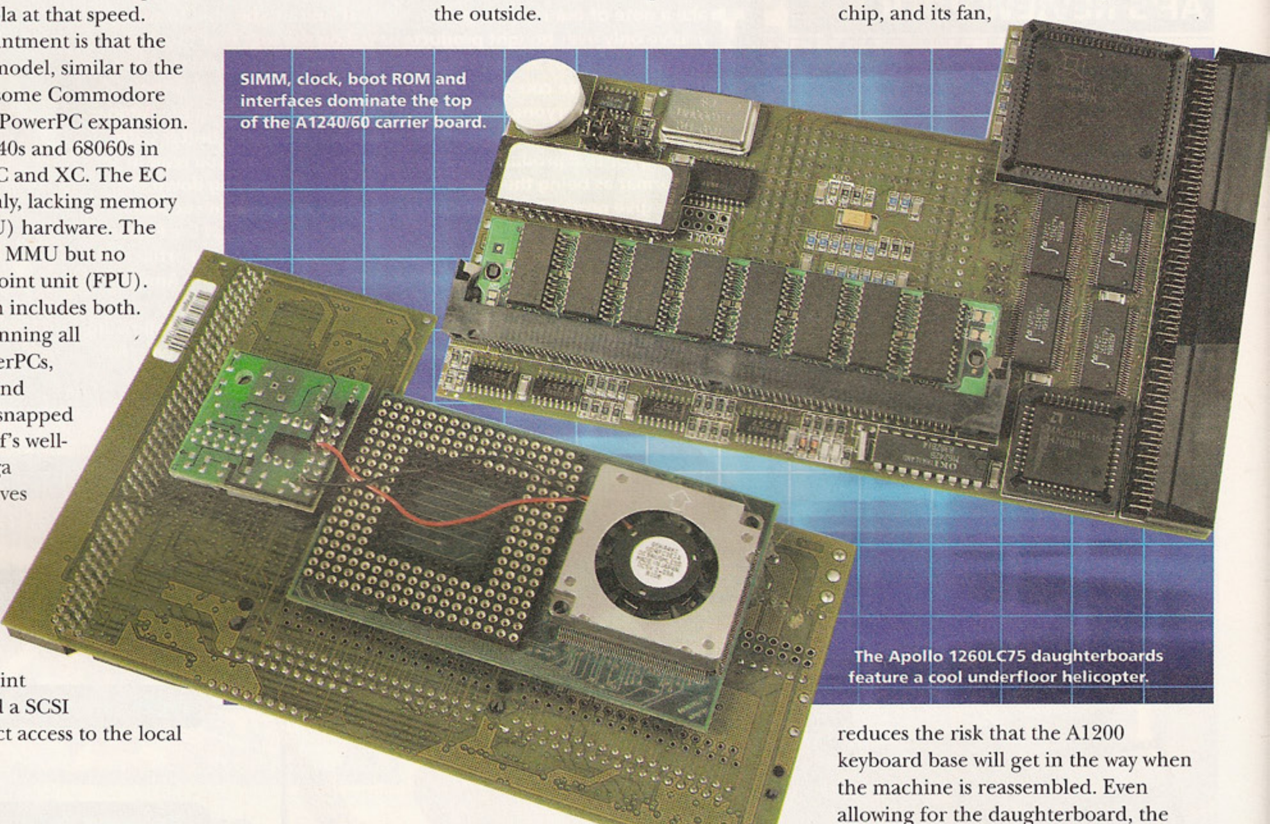
All the 68060s shipped hitherto on the Amiga market have been full XC models, rated at a 'mere' 50 or 60MHz. Motorola previewed 80MHz 68060s almost five years ago, but those scorchers never reached the shops. Instead, they concentrated on producing cheaper versions for the embedded processor market. Our Motorola contact reveals that the FPU is the bottleneck in the 68060 design – the other three parallel execution units could go faster if they didn't have to keep in sync with that.

The original 68060s are made on a 0.5 micron (two million track per inch) production line. Recent chips have been scaled down to a 0.42 micron process, allowing higher clock rates at lower temperatures and prices, but the new chips are only available in EC and LC versions, lacking the FPU.

Apollo have reworked their 68060 accelerator to fit the new version. The original 68060 processors were manufactured in an expensive PGA (Pin Grid Array, or bed-of-nails) package, but EC and LC chips are shipped in a cheaper square package with over 200 connections packed one hundredth of an inch apart, all around the outside.

signals to the LC chip, soldered down alongside. Two more wires link the power supply to a cooling fan on top of the new processor.

You can switch to a full 68060 later if you decide you can't live without the FPU. This swap is best left to your dealer as damaged pins could prove to be very expensive. The slimline design of the LC chip, and its fan,



SIMM, clock, boot ROM and interfaces dominate the top of the A1240/60 carrier board.

The Apollo 1260LC75 daughterboards feature a cool underfloor helicopter.

reduces the risk that the A1200 keyboard base will get in the way when the machine is reassembled. Even allowing for the daughterboard, the whole lot is substantially slimmer than a fan-cooled PGA 68040 or 68060.

HARDWARE

Apollo's 75MHz accelerator is based on the circuit card and Amiga interface of the 1240 Turbo (reviewed in *AF123)* plus two extra daughterboards. This reduces the price of the accelerator as little new design work is needed. The disadvantage

> Fully-expanded units feature over two billion transistors capable of responding 10 million times per second...

is that the local memory interface is little faster than the 68040 version.

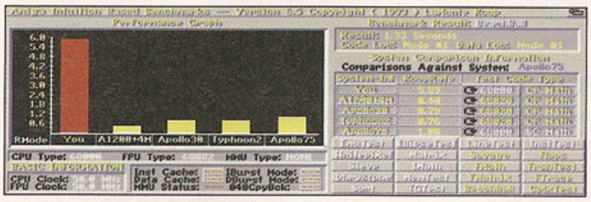
One daughterboard generates a 3.3V supply for the low-power 68060 core. The other plugs into the PGA socket, with fine traces carrying all the

FITTING

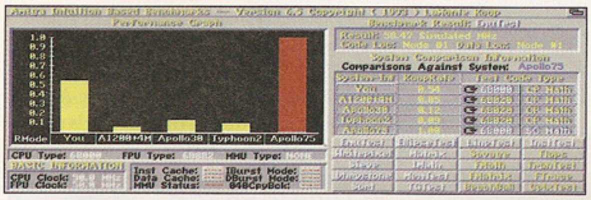
The Apollo accelerator is a tight fit in the trapdoor under the A1200; the Blizzard slides in easily, though it's even taller. A Blizzard 1230 SCSI daughterboard holds the second SIMM and interface and a narrow IDC cable under DF0: ferries SCSI signals to a disparaged Mac/A3000-style 25-way D-type external socket. The only jumper allows hardware ROM remapping without using the MMU. The CPU has no fan and gets scorchingly hot, like the SIMMs, without ventilation.

Both boards demand a lot of power, more than the A1200 supply can safely deliver once you've piled on RAM and an internal hard drive, let alone floppies, PCMCIA, serial and parallel

S Blizzard A1260/50



The Blizzard FPU boosts rendering on the Beachball test.



The Apollo outruns the Blizzard on raw emulation speed.

devices. The 32MB LC Apollo coped with an uprated A500 supply but the full processor with 256MB of RAM provoked a thermal shutdown after about an hour so I switched to a Goliath supply for the Blizzard tests.

Given that the fully-expanded unit features well over two billion transistors capable of responding 10 million times per second or faster, this shouldn't be construed as a fault of the Blizzard, just a sign of how far it takes the A1200. If the type 2102 RAM chips in my 1979 micro supplied the Blizzard's 256MB, you'd need half a megawatt to power all 2,097,152 of them!

UTILITIES

Each accelerator comes with vital libraries and a CPU command to adjust the processor's parallelism, slowing things down for a few programs that predated 68060s. The Blizzard falls back to the 68020 if the "2" key is pressed during startup for compatibility with old games; an internal Apollo jumper has a similar effect.

Power Computing supply *CyberPatcher*, which is similar to *OXYPatcher* in principle, replacing unimplemented instructions with ones the 68060 favours, but is less extensive in its effects. OXYPatcher (*AF107*) benefits both but has more effect on the Blizzard where it can recode 68882 FPU instructions for the 68060 FPU.

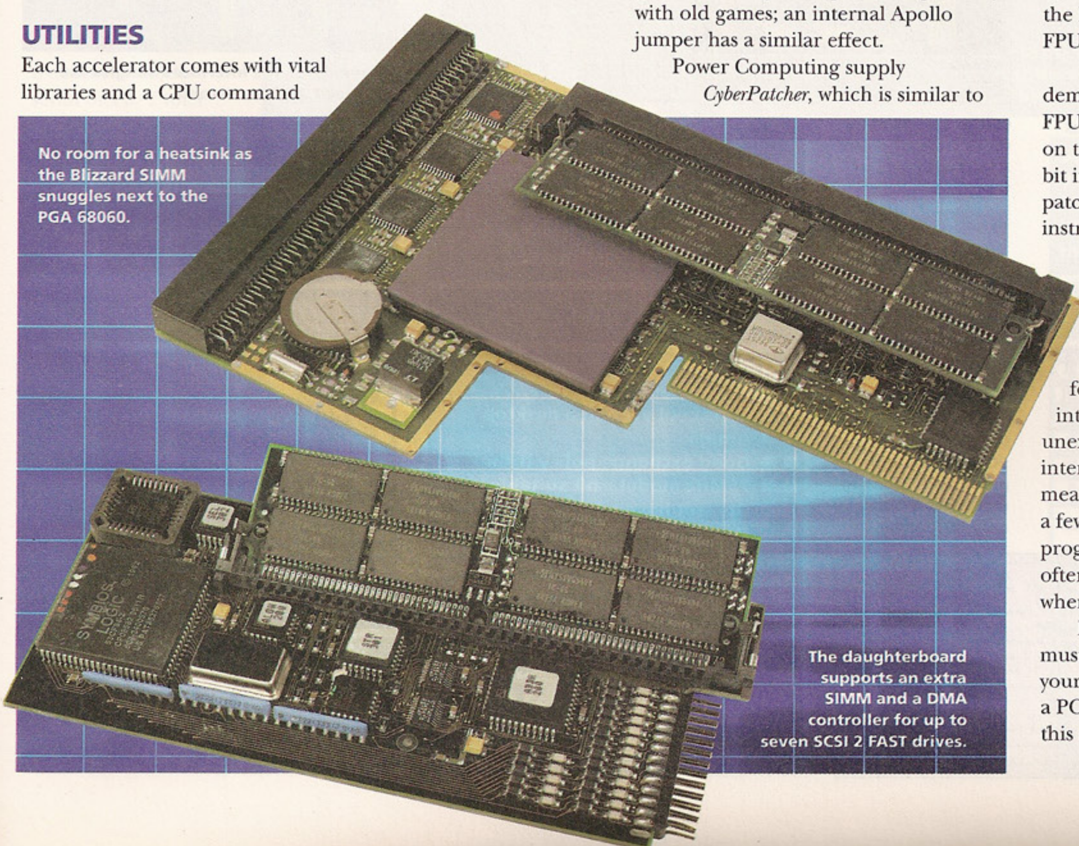
Mand2000 renders the *WeirdCycler* demo in 23 seconds on the Blizzard FPU with *CyberPatcher* and 72 seconds on the Apollo, using *OXYPatcher* and 32-bit integer maths. Both struggle without patches because *Mand2000* uses 68882 instructions or 68020 through 68040 64-bit maths extras that 68060s must emulate by exception.

METADIMENSIONS

The Apollo accelerator goes all out for MegaHertz. It excels in CISC integer performance but is otherwise unexceptional. Apollo's burst memory interface and the lack of FPU hardware mean even a 1230/50 creeps past it on a few tests, but it's blisteringly fast at program logic and simple arithmetic, often 10 times faster than the 68030 when the tests are slanted its way.

Before you plump for the LC75 you must decide what you really want out of your Amiga. You're unlikely to impress a PC owner with the clock rate, though this chip rivals the integer performance

Continued overleaf ⇒



No room for a heatsink as the Blizzard SIMM snuggles next to the PGA 68060.

The daughterboard supports an extra SIMM and a DMA controller for up to seven SCSI 2 FAST drives.

MEMORY SPEEDS

The Apollo's access time for consecutive long words averages 100nS, reading up to 40MB per second, four times faster than the same RAM in a stock A4000/'040. Writes average 25MB/second with one transfer every 150nS. A 50MHz Blizzard reads the same 72-pin, 70nS SIMM RAM slightly slower, averaging about 112nS or 35MB/second, but is faster on chip RAM writes.

The 68060 core is so fast that you get a big benefit if everything fits inside the two 8K instruction and data caches. The LC processor has a total cache bandwidth of 900MB per second while the parallel instruction execution units support sustained transfers of 1,800MB a second.

***AIBB* tests underrate the 68060 because they contain optimised code for earlier chips but must be fooled into treating the 68060 as a steroidal 68000. *SysInfo* crashes the LC when it gropes for the FPU, but that's little loss.**

Eyetech offer tower owners Apollo boards fitted with a second SIMM socket, allowing up to 64MB of fast memory, but there's only room for a single SIMM, from 4MB to 32MB in capacity, in a desktop A1200. It suits EDO and FPM memory rated at 70nS or less, in either 32-bit or 36-bit IBM format.

The Blizzard supports one or two SIMMs of 4MB to 128MB each; avoid 'hyperpage' types which deliver only half their rated capacity. Actual SIMM speeds and sizes vary more than adverts might suggest, so you're still well advised to get a swap-back agreement with your supplier in case of timing or mechanical problems, particularly with SIMM sizes above 16MB.

MAXIMUM RAM BANDWIDTH COMPARED BY BUSTEST 0.19

LONG WORD	READ	WRITE	READ	WRITE
CPU card	Chip RAM		Fast RAM	
Apollo 68LC060/75	4.4	4.4	39.2	26.6
Blizzard 68060/50	4.4	5.5	35.7	24.3

SCSI DMA

The Direct Memory Access (DMA) is a unique benefit of the Blizzard range. DMA is common on desktop Zorro III systems, but no other 68K accelerator for A1200s can transfer data to and from SCSI drives without processor intervention. This feature makes the best use of the intelligence built into every SCSI device, giving a clear path from the drive controllers to your Amiga's RAM.

DMA is ideal for demanding real-time applications like animation and digital audio. Transfers take place at top speed with little impact on processor performance. The result is smooth, reliable video capture and replay, MPEG decoding and multi-track mixing. If these are the applications that really stretch your Amiga, SCSI DMA will benefit you more than sheer Megahertz because polled IDE or simple SCSI ports waste CPU cycles between each data transfer.

◀ of P200s and is much easier to program. Workbench operations, Internet browsers and most modern games will fly.

The Apollo 68060LC75 is also ideal for running really demanding emulators, like Christian Bauer's *Frodo*, *Spectrum128* by Alberto Ordóñez or even the Amiga version of *UAE*, though it's pricier than the real systems these programs emulate. *PC Task 3* manages 34MHz AT speed on the Apollo in turbo mode, or 23MHz on the Blizzard, which is enough for *Wolfenstein* or torpid Windows emulation. However, many emulated PC and Mac applications expect FPU hardware.

This upgrade is aimed at existing Amiga owners with a feel for the demands of the programs they like to run. Heavyweight Amiga software is often available in FPU and optimised integer versions. As yet, optimised 68060 code is almost as rare as PowerPC versions, but compatibility is far better. The gap may be less than benchmarks suggest since the integer unit offers two-cycle 32-bit multiplication, 14 times faster than a 68030 at the same clock rate. This means that Apollo integer MPEG audio decoding can be twice as fast as '040 FPU code on full 68060s.

HEAD TO HEAD

If 68K integer performance is the bottleneck then the Apollo is the best you can get, but when programs are limited by memory speed or floating point maths, this Apollo offers little more than cheaper accelerators and it's no match for a full 68040 or 68060, let alone a PowerPC, if you demand ultra-fast floating-point.

The Apollo's extra MIPS outpace the Blizzard measurably at emulation and MPEG, but real FPU hardware makes the Blizzard many times faster on most digital filtering and rendering operations. Overall, the Apollo expresses 68882-performance on most floating-point tests, but the full 68060 can beat that 10 times over on brute-force arithmetic. Also, the Blizzard's SCSI interface leaves six-sevenths of the CPU time and two thirds SCSI bandwidth for other devices while shifting data twice as fast as polled IDE monopolising the CPU.

SOFTWARE SUPPORT

Power Computing bundle more software, including *CyberSnooper* and *CyberGuard*, an *Enforcer/MuForce* clone. Aminet's *FastExec*, *SpeedyChip* and *MuForce* help to close the gap but they can't make up for the missing FPU.

There's no Amiga equivalent of the Mac's *SoftFPU* emulator, but that would crawl along on FPU-only programs like *Quake* anyway. Realising this, Eyetech match the price of the Apollo LC 75MHz and 50MHz full 68060s, with just carriage to pay if you opt to exchange either way within 30 days. You can upgrade an LC75 to the full 66MHz version, the ultimate 68K rendering engine, for £85 plus carriage.

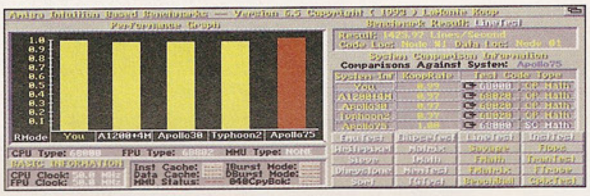
OVERALL VERDICT

The choice really comes down to your taste in applications. The Blizzard is the most well-rounded system, short of Zorro III, for those with a substantial investment in high-end Amiga software. The Apollo delivers a lot of punch for your pounds and is unrivalled if you want the best possible performance from programs designed to run on every 32-bit Amiga.

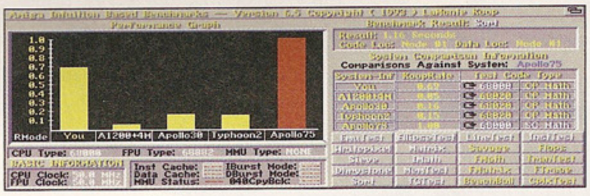
Neither of these can match the potential of PowerPCs, but if you're interested in multitasking Classic Amiga applications, both of these boards come at the top of the class.



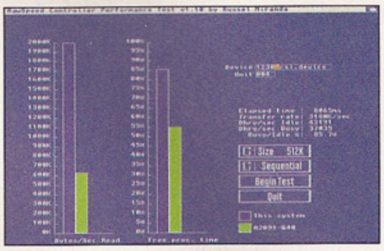
Even on 68000 code, the LC75 dwarfs Commodore CPU speeds.



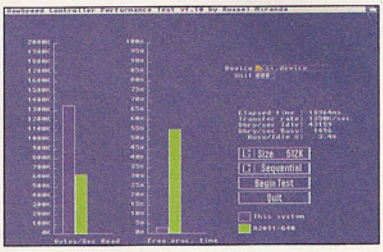
Blitter line-drawing is hardly influenced by the CPU speed.



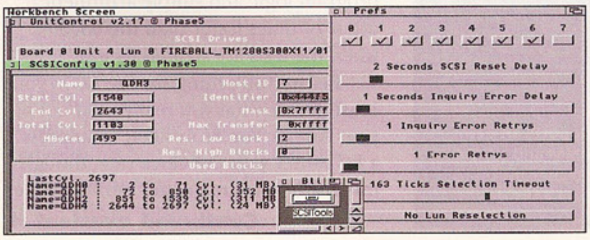
68060s sort 14 to 20 times faster than an A1200 with 4MB of fast RAM.



Blizzard SCSI leaves 86% free CPU time while shifting over 3MB per second.



Commodore's IDE interface strangles the 68060 at 1.3MB per second.



Unit Control sets SCSI options and phase 5's *SCSIconfig* resembles a text-only *HDToolbox*.

Apollo 1260LC, 75MHz 68060, internal MMU, no FPU
SUPPLIER: Eyetech 01642 713185
Email: sales@eyetech.co.uk
PRICE: £264.95 (with 1 SIMM socket), £284.95 (with 2 SIMM sockets)

Pros and Cons

- ➕ Unrivaled 68K integer performance.
- ➕ Runs cool even in a desktop Amiga.
- ➕ Good exchange policy if the 75MHz model isn't suitable
- ➖ Doesn't have a hardware floating-point unit.

OVERALL VERDICT:
The ultimate engine for 68000 programs.

90%

Blizzard A1260/50+SCSI, 50MHz 68060, internal MMU and FPU
SUPPLIER: Power Computing 01234 851500, web: http://www.powerc.co.uk
PRICE: £309.95 (with 1 SIMM socket) £379.90 (with fast SCSI + 2 SIMMs)

Pros and Cons

- ➕ Transparent fast SCSI 2 DMA.
- ➕ RAM expansion up to 256MB.
- ➕ Full 68060 with FPU.
- ➖ Needs cooling if fully expanded.

OVERALL VERDICT:
The most well-rounded 68K expansion for A1200s.

91%

Topolino Adaptor

Can't find a new Amiga mouse anywhere? Time to use a PC one, says **Ben Vost**.

The main problems with using a PC mouse on your Amiga are twofold. The first problem is that the mouse uses a valuable serial port which can be better put to use driving a modem. The second problem is that to use a PC mouse, you need a software driver. This means that a mouse-powered game that ignores the OS can't be played with this new PC mouse, but more importantly, you can't hold down both mouse buttons to get to the early boot menu.

What to do? Do you leave your existing Amiga mouse attached for those occasions and use the PC mouse at all other OS-compliant times? Well, you can, or you can simply plug your PC mouse into your mouse port and have it available at all times. The only trouble is that PC serial or PS/2 mice aren't compatible with Amiga mouse sockets. Here's where the Topolino comes to the rescue. It's a short adaptor that allows you to plug any PC mouse into your mouse port and use it without having to install any software or anything.

> The range of mice we tested it with wouldn't allow us to make use of the wheel, or the middle mouse button...

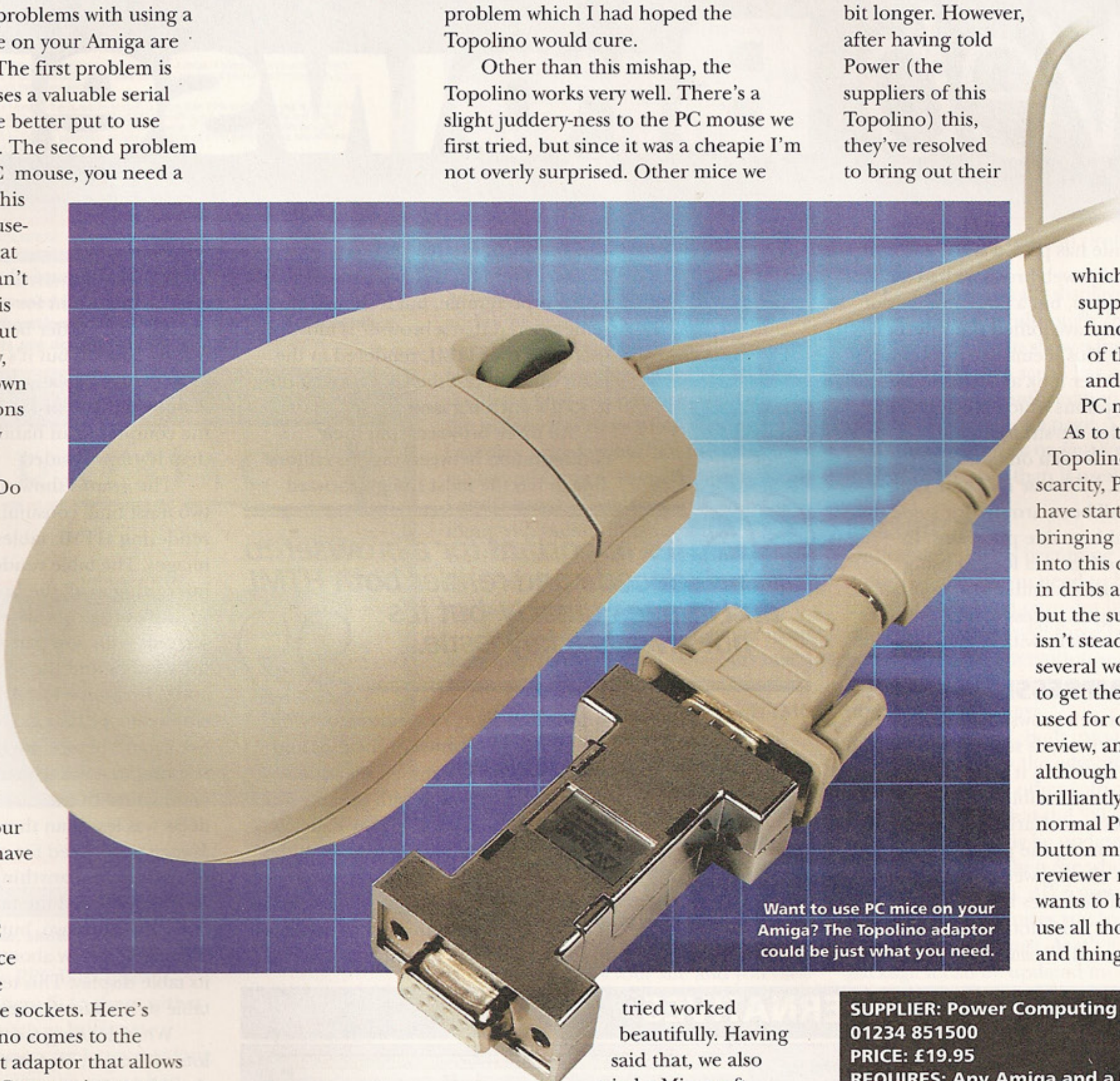
It's an almost perfect solution, although it's not without its problems. The range of mice we tested it with wouldn't allow us to make use of the wheel, or the middle mouse button, rather reducing the number of mice you can successfully use. And, after all, there isn't a shortage of two-button Amiga mice right now – it's a shortage of three-button rodents that's the problem which I had hoped the Topolino would cure.

Other than this mishap, the Topolino works very well. There's a slight juddery-ness to the PC mouse we first tried, but since it was a cheapie I'm not overly surprised. Other mice we tried worked beautifully. Having said that, we also tried a Microsoft mouse. It obviously recognised the technical superiority of the machine it was being used in and refused to do anything – it's no wonder that PCs need drivers for their mice.

Talking of which, here's another ability your Amiga has which a PC doesn't – you can plug and unplug Amiga mice all day long, but a PC has to be shut down before you can change mice. Crap, eh?

So the upshot is that in addition to its scarcity, the Topolino is only going to be of use to you if you want an expensive two-button mouse. For those wanting the delights of a third button and mousewheel (there is some *MUI* software that now supports it, including *YAM* and anything else that uses the NListViews mcc), you'll have to wait a bit longer. However, after having told Power (the suppliers of this Topolino) this, they've resolved to bring out their own version which will support the functionality of the cheap and plentiful PC mouse.

As to the Topolino's scarcity, Power have started bringing them into this country in dribs and drabs, but the supply isn't steady. It took several weeks just to get the one we used for our review, and although it works brilliantly with normal PC two-button mice, this reviewer really wants to be able use all those wheels and things...



Want to use PC mice on your Amiga? The Topolino adaptor could be just what you need.

SUPPLIER: Power Computing
01234 851500
PRICE: £19.95
REQUIRES: Any Amiga and a PC mouse (not Microsoft)

Pros and Cons

+ Opens up Amiga users to really good quality PC mice.
+ It doesn't require any extra software.
+ Topolino is fully Amiga compatible.
- Doesn't support all PC mouse buttons or functions.

OVERALL VERDICT: Good idea, poor execution. If it could cope with PC mousewheels and third buttons it would get a Format Gold for sure.

76%

Head-2-Head

We've been telling you to get online for a long time now, but which browser is the best? **Neil Bothwick** has the answer.

Web Browsers

A while has passed since any of the Amiga web browsers had a major revamp, but a large number of Amiga users have joined the Internet since then. This seems like a good time to take another look at the various browsing options which are available and consider the strengths and weaknesses of each one.

AWeb 3.2, *IBrowse 1.22* and *Voyager 2.95* have all been around for some time and should be stable programs. In addition we'll have a look at using *Netscape* browsers under Mac emulation, in order to gain access to features not currently available with Amiga software.

FIRST IMPRESSIONS

Although a web browser will work "out of the box", it needs some configuration to get the best from it and to make it work as well as possible with your Internet account. Early use of a browser can involve using the preference editors more than viewing web pages, and it's here that differences between the browsers are most noticeable.

Voyager and *IBrowse* use *MUI* (*Magic User Interface*), whereas *AWeb* uses *ClassAct*. Opinion is sharply divided as to which is preferable, but it should be remembered that a browser is mostly used with the HTML rendered in the main window, not the GUI surrounding it, so it's not a big issue.

All three browsers split their configuration between various editors. *Voyager* has the most straightforward approach, having one editor covering the majority of browser functions and with MIME types handled separately, sharing these settings with other programs. *IBrowse* splits fairly logically between General and Network settings, whereas *AWeb* has four preferences editors, sometimes leading to confusion for new users when they try to find the window to change a particular setting.

> **"It's important for a browser to decode and render both HTML and images quickly, but it's not always a key issue."**

SPEED

Computer users are obsessed with speed and it's important for a browser to decode and render both HTML and images quickly, but it's not always a key issue. Using a relatively fast CPU over a dialup (modem or ISDN) link means the computer can handle the data faster than it's downloaded.

The graphs show comparisons of the two most time consuming operations: rendering HTML tables and decoding images. The table rendering example is interesting as all the browsers appeared to display the complete table within 10 seconds – the top part was displayed in the window and the scrollbar was correctly sized – but *AWeb* and *Voyager* needed more time before the page was usable and before the browser would respond to any keyboard or mouse commands. In the case of *AWeb* this delay was less than three seconds, but *Voyager* was locked for more than 40 seconds before anything could be done. *IBrowse* rendered the table much faster than the other two, but see the comments below about the accuracy of its table display. This test used a large table so it's a fairly extreme example.

When loading a complete page with lots of images, *Voyager* was much faster than the other two. Loading the same page with image loading disabled took almost the same time on all three browsers – the difference is in the speed of the image decoding engines.

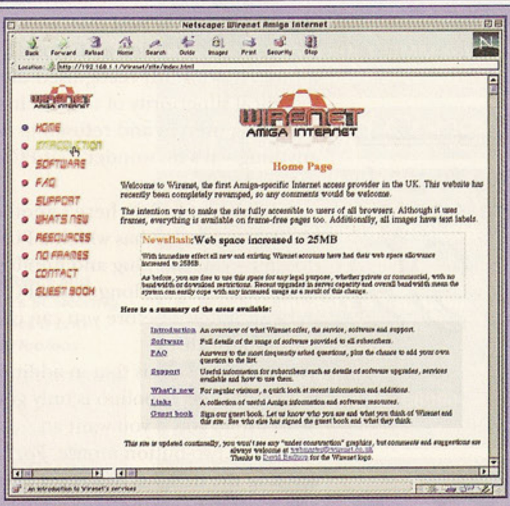
Although these tests were carried out on a PPC-equipped Amiga, none of the browsers are able to directly make use of the extra power available. However, *IBrowse* and *AWeb* can be configured to use DataTypes instead of their own decoders. DataTypes normally give slower decoding but the extra speed of the akPPC DataTypes more than makes up for this. The disadvantage is that DataTypes don't permit progressive decoding so the whole image has to be downloaded and decoded before anything is displayed. Since most Amigas are capable of decoding images faster than a modem can supply them, the

THE EMULATED ALTERNATIVES

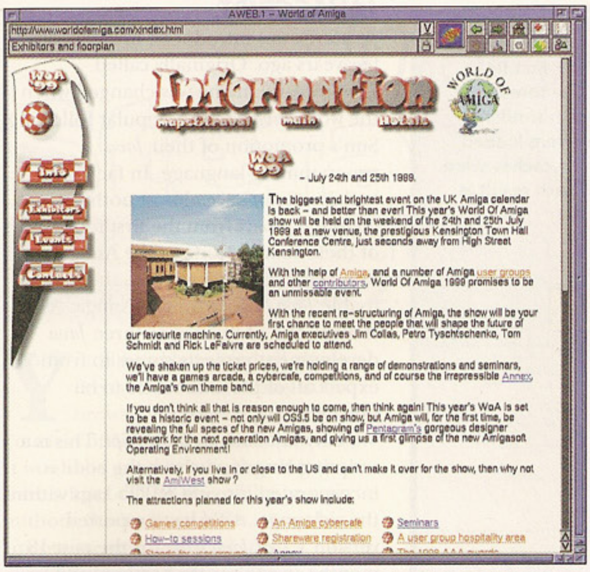
Sometimes you just can't do what you need to with an Amiga browser. In most cases the solution is to use *Netscape* running under Mac emulation, either *Fusion* or *ShapeShifter*. You can either connect directly through *MacTCP*, which means you need no extra software but you can't have your Amiga and the emulated Mac online at the same time, or you can use nullser.device and *MiamiDx* to allow the Amiga and "Mac" to access the net at the same time.

Once you run *Netscape* under emulation, you realise just how good and efficient the Amiga browsers are. It's running on exactly the same CPU as your own browser but it's quite sluggish by comparison. It also has quite serious problems handling some table and frames layouts, which is odd considering it was *Netscape* that invented both of these.

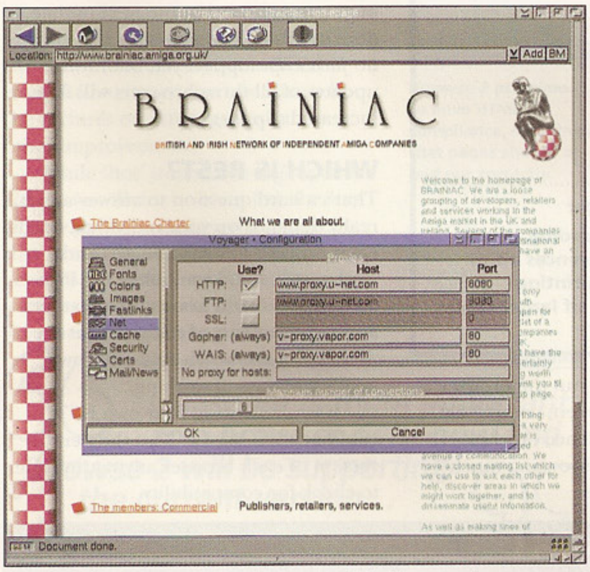
Using *Netscape* is not a good alternative to any of the Amiga browsers for general browsing, but it is useful to have in reserve when you need to access a page that the Amiga browsers can't handle.



An Amiga site displayed in a Mac browser, running on an Amiga. The display is similar to that of the Amiga browsers, but it took a lot longer to load.



***AWeb* announcing the World of Amiga. Notice how the Exhibitors button appears depressed (the mouse was over this) and the explanation of the function of this button at the top of the window. Both of these effects are done with *JavaScript*.**



A grab from *Voyager*, showing the logically laid out preferences.

extra speed of the PPC DataTypes is normally only of benefit to those with a fast connection, such as Ethernet.

All three browsers took twice as long to decode and display the page when using an AGA display. In this case the decoder also had to reduce the number of colours in each image, matching it to the available palette, effectively performing image processing functions on each image after decoding it. With a 16-bit graphics card display, it simply has to decode the image and display it in its own colours.

RENDERING ACCURACY

HTML is not WYSIWYG (What You See Is What You Get). How each page is rendered depends on the individual user's settings in the browser, but there are some basic rules that all browsers should follow. Unfortunately they don't all do so. *AWeb* follows the rules most faithfully. It supports three modes of HTML "compatibility": the Strict mode is good for testing your own pages, the Tolerant mode supports many of the non-standard *Netscape* and Microsoft additions and the Compatible mode does its best to deal with poorly written HTML. For straightforward HTML text, the three browsers perform similarly; the differences show when viewing more complex page layouts that use lists, tables and frames. *Voyager* doesn't handle ordered lists correctly, showing them with bullets instead of the numbers that should be in front of each list item. *IBrowse* renders lists correctly, but tables are another matter.

More and more sites use tables in an attempt to create attractive layouts in a medium that wasn't originally intended for such layouts. *AWeb* follows the HTML specification most closely and *Voyager* generally lays the tables out as expected, although there are occasional quirks.

However, *IBrowse* has difficulties rendering more complex table layouts, particularly nested tables. It often takes quite a bit of fiddling with the HTML source to get some table layouts to be correctly displayed by *IBrowse*, which isn't too bad if it's your site and you have the time to do this, but it's no help when trying to view a site over the Internet. It's by no means the worst browser for this, though – *Netscape* has real problems displaying tables.

Frames are usually displayed well in all three browsers, although *IBrowse* will sometimes refuse to show a frame if it's too small to hold a scroll bar and arrows, such as a one line information frame at the top or bottom of a page. This tends to be done with *Java* or *JavaScript* now so it's less of an issue than it used to be.

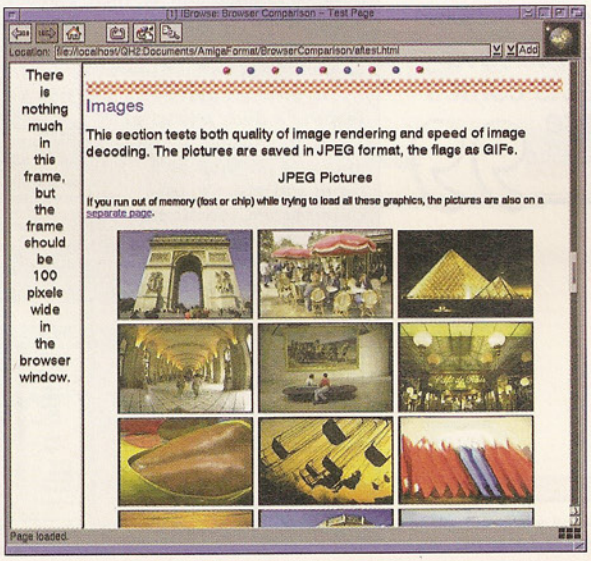
WHY ARE WE SO FAR BEHIND?

Browsers like *Netscape* and *Internet Explorer* are written by teams of full-time programmers, whereas each of the Amiga browsers is written by a single individual who also has another job. It's amazing that they keep up as well as they do, but they also have several advantages. By playing catch up they're working towards known goals, albeit moving ones, since the development of the way each feature works has been done by the "big boys".

However, the Amiga browsers still add useful features which are unique to the Amiga. *AWeb* has the ability to execute ARexx or AmigaDOS commands in links on local pages, which is very useful for documentation. *IBrowse* and *Voyager* can utilise *Contact Manager* to use a single, system-wide address book of URLs, email addresses and more. *Voyager* uses system-wide MIME-type preferences, sharing a common setup with other Internet software and automatically decoding downloaded archives via *X-Arc*.

In fact, most of the new developments in web technology aren't directly part of HTML, apart from CSS (Cascading Style Sheets). Most features that the PC world has but we lack are handled by plug-ins. There's no reason why third parties can't produce decoders for these, as is already happening with the *RealAudio* and *Shockwave* plug-ins.

JPEG graphics on the test page, rendered in full colour by *IBrowse*.



SECURITY

Online shopping is becoming more and more popular so you need to be able to transmit order and payment information is a secure manner. All three browsers handle SSL, the encryption security system used for https:// pages, but they do it in different ways.

Voyager has SSL built into the browser, which has the advantage of not depending on any other software and the disadvantage that the SSL encryption can only be updated to newer standards when the whole browser is updated. *AWeb* uses *MiamiSSL*, which in turns requires you to be connecting via *Miami*. As it's a separate package it can be updated more often than a built-in system, and *MiamiSSL* is currently more up to date than the browser implementations, but you have to run *Miami* or *Miami Deluxe* to use it.

IBrowse offers the best of both worlds: it has internal SSL, making it independent of your TCP stack, or it can use *MiamiSSL*. The added benefit of this approach is that *Miami* users can choose to use whichever SSL is more up to date.

STABILITY

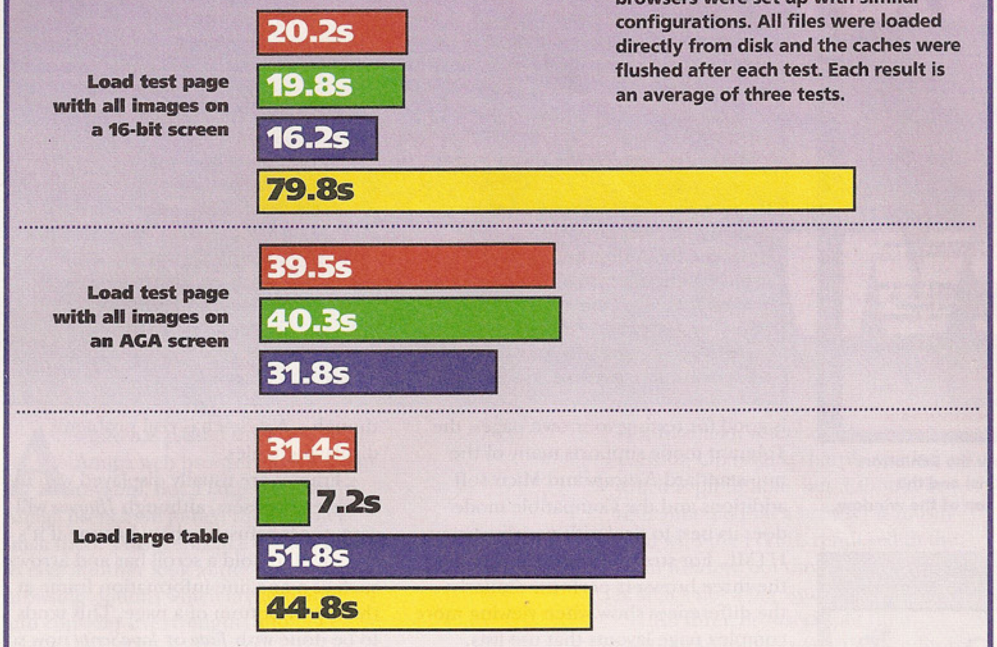
All three Amiga browsers were reliable during testing, although many people report stability problems with various browser setups. This is usually caused by one of two factors: incorrect versions of *ClassAct* classes or *MUI* .mcc files can cause various problems, but the most common failure is running out of memory, particularly chip memory.

A web browser is a complex piece of

Continued overleaf ⇒

Speed comparisons

The tests were carried out on an A4000/'060 with 144MB of fast RAM and a CyberVisionPPC. The three browsers were set up with similar configurations. All files were loaded directly from disk and the caches were flushed after each test. Each result is an average of three tests.



Pros & Cons

AWeb | IBrowse | Voyager | Netscape

AWeb
- \+ Accurate HTML display
- \+ Graphic page printing
- \+ JavaScript
- – Confusing preferences

IBrowse
- \+ Fast page rendering
- \+ Choice of SSL options
- \+ Clear GUI and menus
- – Poor table handling

Voyager
- \+ Fast image decoding
- \+ Intuitive preferences editor
- \+ Graphic page printing
- – Slow handling of larger tables

software, performing many different tasks simultaneously. For example, each image download involves making a connection to the server, downloading the image file, saving a copy in the cache, decoding the image, rendering it to suit the available palette (and possibly calculating that palette first), displaying it in the browser window and maybe reformatting the entire HTML display to flow around the image. As you may be downloading several images at once, you begin to marvel that anything works.

> *As soon as one of the Java development projects comes to fruition, expect all of these browsers to be updated...*

Doing this without a graphics card means that much of this image processing and display has to be carried out in chip memory, with multiple processes all trying to grab their share of the precious chip RAM.

The Amiga's operating system doesn't handle low chip memory situations very well, so it's hardly surprising that browsing graphics intensive sites can cause some problems. Anything the browser programmer or user can do to reduce chip memory usage can help, but the best solution is to run the browser on a graphics card screen, completely removing the dependence on chip memory and making browsing much faster and more stable.

JAVASCRIPT

JavaScript was introduced by *Netscape* a few years ago. Originally called *LiveScript*, the name was changed when the word *Java* became popular following Sun's promotion of their *Java* programming language. In fact, *Java* and *JavaScript* have almost nothing in common, apart from the first four letters of their names. None of the Amiga browsers support *Java* yet as there's no usable *Java* engine for the Amiga. As soon as one of the two or three *Java* development projects comes to fruition, expect all of these browsers to be updated to work with it.

Anyway, back to *JavaScript*. This is a scripting language where the code is incorporated into <SCRIPT> tags within the web page. *AWeb* has supported version 1.1 of *JavaScript* for the past 18 months and this is the version used by *Netscape* and *Internet Explorer* in their v3 incarnations. It's getting slightly dated now, but apart from a couple of minor bugs that are fixed in the next update, it does its job well. *Voyager* and *IBrowse* have no *JavaScript* support yet, but future updates of all three browsers will feature increased support.

WHICH IS BEST?

That's a hard question to answer and it really depends on your individual needs. Each browser has its strengths and weaknesses, so take a look at the Pros and Cons boxout. Look at the features and requirements of each, try out the demos and see which suits your own needs and ways of working.

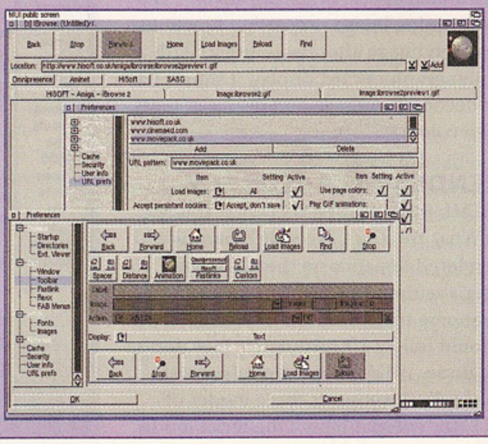
If you're writing your own HTML you'll need to have at least the demo version of each browser anyway, in order to check for compatibility.

COMING NEXT

All three browsers are due for an update soon. We weren't able to get full details for *Voyager 3* in time, but it's likely to include *JavaScript 1.2*, CSS, rewritten image decoders for even more speed and an improved cache system.

AWeb 3.3 will have several bug fixes and improved cookie handling, a far more configurable interface, including all menus and navigation buttons, plus an optional floating toolbar. There's an option to suppress those annoying banner advert windows, an increased ARexx command set and an enhanced plug-in API, allowing support for new file and data formats to be added. This will be a free upgrade for registered users.

***IBrowse 2.0* has been a long time coming but its release is imminent. New features include *JavaScript 1.2*, an improved GUI, improved preferences, a faster and easier to use cache system, rewritten table parser, multiple browsers in one window and improved plug-in support. It will also have the ability to set how *IBrowse* displays individual websites.**



A sneak look at *IBrowse2*. The tabs enable you to display multiple sites in a single window, instead of shuffling windows on the screen, ideal for smaller screenmodes.

Interview with Stefan Burstroem

Amiga Format chatted to *Stefan Burstroem* about the forthcoming release of *iBrowse 2*.



iBrowse 2 promises to have HTML 4 compliance, meaning that pages should be laid out correctly.

WHAT'S NEW?

iBrowse 2 will include the following:

- HTML 4
- JavaScript 1.2
- New GUI
- New Prefs
- New Cache
- New CacheBrowser
- Plug-in support
- Speed improvements and more.

You'll be able to read all about the current state of play in the browser market on pages 56-58, courtesy of Neil Bothwick, but I thought it would be good to take the chance to have a brief talk to one of the browser authors, Stefan Burstroem, about his upcoming new release of *iBrowse*. Stefan currently lives in America where he is studying at university.

The new version of *iBrowse* has been a long time coming but we hope it will be worth the wait as it promises to include several new features, such as the ability to set preferences for individual websites, the tabs shown in the pictures on this page and many other improvements.

While 'hot' items such as *Java* and *RealAudio* will not be included, the way *iBrowse* has been designed means that they can easily be added to later versions. However, not that many websites actually make effective use of *Java* these days, although *RealAudio* support would be nice. *JavaScript* is far more important to a browser right now and *iBrowse 2* will be supporting the current version of that language, allowing for animated buttons, tickers and more in web pages. We only got the beta for it recently so haven't had much of a chance to play around with it, but it's certainly looking good so far and hasn't crashed on us once. Anyway, on with the questions:

> **Javascript is more important to a browser right now and iBrowse 2 will be supporting the current version...**

AF: How long has *iBrowse 2* been in development now?

SB: On and off for over two years. It has been developed in parallel with *iBrowse* version 1.x.

AF: What do you think of *AMozillaX*?

SB: Well, if they can pull it off it would be a nice browser, but I seriously doubt that they will, especially within their promised timeframe.

AF: We know that *iBrowse 2* is said to be supporting *JavaScript 1.2*, but what about *Java* itself? What about *Daytona*?

SB: As soon as Holger is able to produce anything, we're ready to jump on the train. For now, I haven't heard anything about *Daytona* since it was initially announced.

AF: Has the delay in the new version been because of the delay in *MUI 4*?

SB: No, the delay is entirely because of my studies, personal life and the *Star Wars: Phantom Menace* premiere.

AF: Will there be *RealAudio*, *Flash* or any other plug-ins included?

SB: *Flash* will be included but *RealAudio* isn't available.

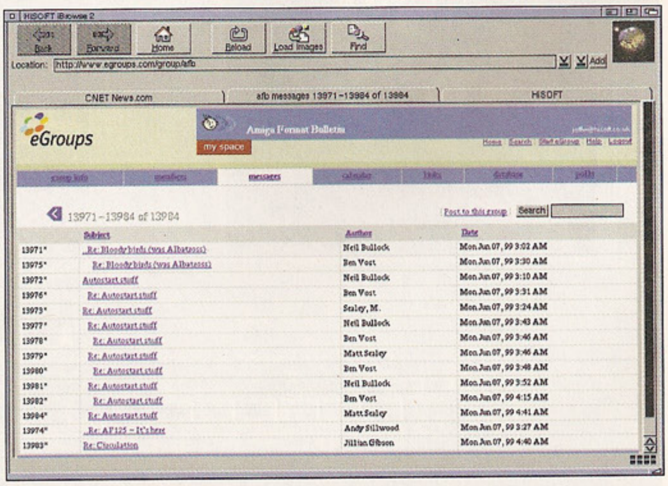
AF: Will you use the .mcc method of plug-in that has been proposed by other browser builders?

SB: I haven't seen any of those specs but the plug-in system is built on top of *MUI* classes so it shouldn't be that hard to write a wrapper for it.

AF: Finally, how long will it be before people can buy *iBrowse 2*?

SB: Hopefully less than a month. AF





The tabs at the top of the browser window indicate that we have three pages open and you can switch to any of them simply by clicking.

ImageFX 4 W.I.P. Codename Adrastea

Kermit Woodall starts us off in our first ever serious work in progress, all about the upcoming new release of *ImageFX*.

This article is the first in a three-part series about the new *ImageFX* release. First, let me tell you a little about how this came about. A while back I emailed Ben, who I've raised many a glass with (his glass contained lager, mine contained orange juice) over the years.

My email was about the new *ImageFX* release. Ben emailed back and asked if I could write a few words about it. In fact, he asked if I could write 1,500 words about it each month, for the next three months. And while I'm at it, could I get the first instalment written in the next week or so? So, while images of Vogon deathships raced through my mind, I politely accepted the assignment.

ENIGMA DEVISING

As beta testers of *ImageFX* know, every beta for a new release has its own code name. *ImageFX 4* was called *Adrastea*. The code names for betas are carefully chosen by a variety of sophisticated selection systems. In this case, however, our programmer Tom made this up and no-one noticed for three months, at which point it was mostly too late to do anything about it.

What is *Adrastea*? It could be an advert for Rastafarian tea, but it's not. It could be part of the Latin phrase, "Ad Astra – Adrastea", meaning "To the stars to buy some tea", but it's not that either. Actually, *Adrastea* is one of the more recently discovered moons of the planet Jupiter, and in Greek mythology,

> "One of the first things we learned was that power users wanted to be able to alter every single parameter…"

Adrastea was the daughter of the god Jupiter and the goddess of rewards and punishments. Seems fitting. We'll reward you with all kinds of new *ImageFX* goodies and we'll mildly punish your bank account by charging you for the upgrade.

CRAZY IDEAS DEPARTMENT

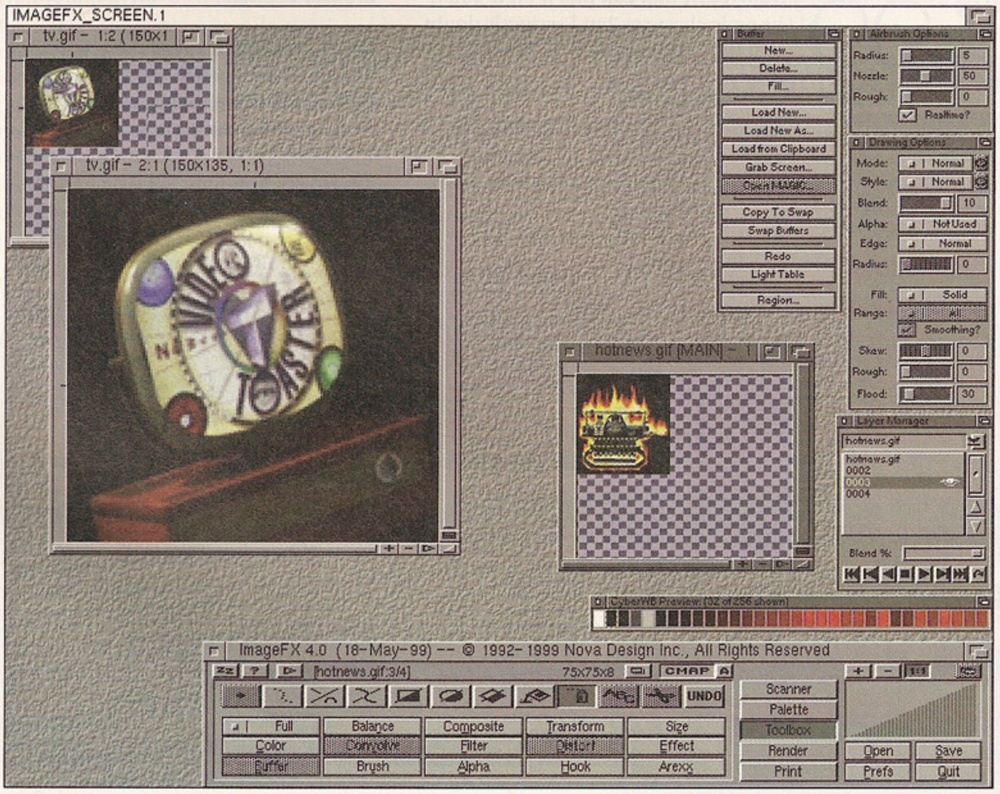
On one set of my business cards I put a title I borrowed from Eddie Churchill of Innovatronics: "Idea Czar". The government here thinks I'm the Vice-President of this company, but all of us avoid the boring administrative tasks as much as possible, so I'm an Idea Czar. Does that mean I think up all the ideas? Not really, but it's my fault if we don't have anything interesting to program.

Many of *ImageFX*'s effects come from years of studying every textbook dealing with image processing, special effects and image manipulation of any kind. We literally started making *ImageFX* (which at one point was just going to be scanning software) by going to our university library and checking out about three dozen books. Piece by piece we'd implement everything that we thought looked interesting.

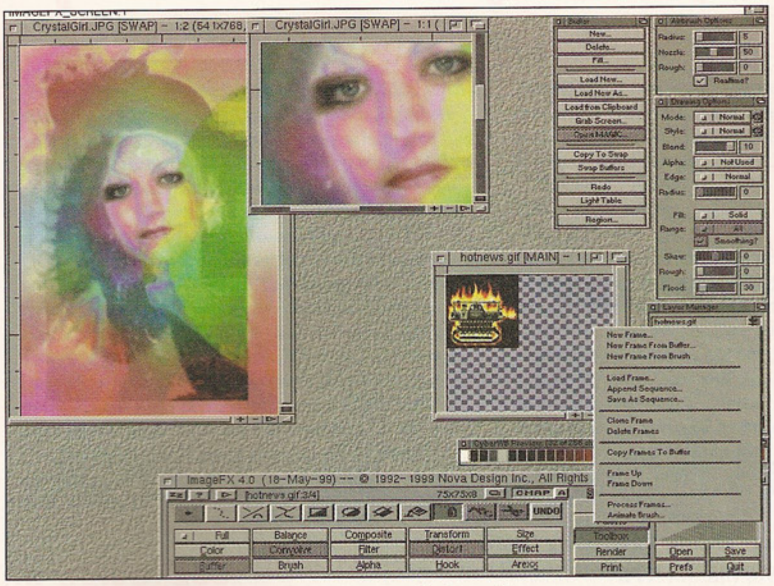
Our best ideas came from a now out-of-print book called *Beyond Photography: The Digital Darkroom* by author Gerard Holtzman. This book, one of the slimmest graphics books you'll find, is the runestone of nearly all of the cool effects you've seen in *ImageFX* prior to version two, and in *Photoshop*. The author creates a simple picture altering language and shows you how to alter the faces of his co-workers. The examples and pseudo-code in the book made it relatively easy to code up similar effects ourselves.

We've also studied software on every computer platform from Amigas to SGIs. We'd visit friends who worked with SGI systems several times in our early days, to study what the 'big boys' used, and then we'd go back and try to figure out how the effects were done and what we could do to make them better. One of the first things we learned was that power users wanted to be able to alter every single parameter in an effect. The second thing we learned was that most people aren't power users and don't want complex interfaces with a hundred gadgets staring at them, daring them to figure out how to use them all.

Our solution to this was to make the first menu of any of our effects contain the basic gadgets you need to just play with, and make sure that the gadgets defaulted to settings that did something



The new animation system uses the layers menu for frames.



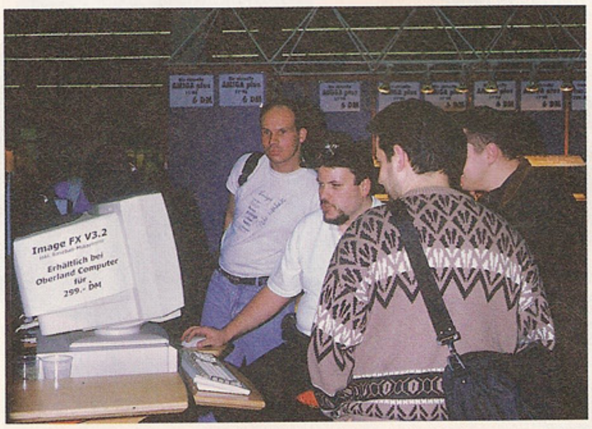
The layers/frames menu now has a whole host of new functions.

interesting. Most of those SGI programs defaulted to settings that didn't even alter the image – you had to figure out the whole program before you could even have fun.

ImageFX 4 has another source of inspiration as well: accidents. I was playing with what was a new package from Adobe called *ImageReady* (moderately interesting software for designing Internet graphics, based on a heavily crippled *Photoshop* interface). As was my usual pattern of behaviour, I hadn't bothered to read the documentation and started playing with their tools for making GIF animations.

I thought I'd found the neatest new idea around – loading animations into the same menu used for layers in layered images and letting you directly access any frame you wanted and control them with VCR-style animation controls. Actually, that wasn't the way in which it worked at all – the layers were there for layering and a frame window let you access frames and with barely any effort at all you could ruin a perfectly good animation because of the duplication of controls between the two windows.

However, the idea I had before I understood how it really worked was pretty good. That accidental misunderstanding was the germ of the idea for the animation features that we've now added to *ImageFX 4*.



Nova Designs' 'Idea Czar', Kermit Woodall (seated), is always on hand at shows to demonstrate his excellent software.

FEATURED FEATURES

So, enough about us and Nova Design, Inc. – what are these new features in *ImageFX*? Aside from the usual crop of new special effects, the big new feature is integrated animation, just in case that wasn't already obvious from everything else I've been rambling on about so far!

The animation features are integrated into the Layers Manager menu. When you create an image with frames or load a GIF, ANIM image sequence or FlyerClip (Amiga Toaster/Flyer owners only for this one), the Layers Manager will turn into an

> We've also added a Fireworks effect to allow you to simulate fireworks displays over your images and video sequences.

Animation Manager for you. There are VCR-style controls at the bottom of the Layers Manager menu that allow you to navigate through all the Layers/Frames easily. Keyboard controls have also been assigned, including a duplicate set of key controls that match *Deluxe Paint V*'s keys (the 1, 2, 3, 4 keys) for navigating through an animation.

Having the Layers Manager giving you access to all the frames of an animation is simply brilliant. You can easily access any individual frame by clicking on it. You can move frames around, insert frames and do anything you want far easier than ever before.

Since *ImageFX* started supporting colour-mapped pictures (also know as palette-mapped pictures) directly, without converting them to RGB images, this means that ANIMs and GIF animations don't take up the large amounts of memory that the full colour animations and image sequences require.

Several options have been added to the Layers/Frames Manager menu for animation as well. The most important of these are the Process Layers/Frames option and Animate Brush.

Process Layers/Frames allows you to call any macro-recorded ARexx script from *ImageFX*, or any of the *AutoFX* scripts, and have them animate the effects directly on the frames in memory. A bonus is that this now also allows you to apply effects in batch on layered images as well. Now you can colour correct all layers in an image at once, plus many other timesaving tasks.

Animate Brush is similar to the old *Deluxe Paint* 'Move Brush' requester. Many users have asked for this, but since *ImageFX* really lacked an animation system previously, we didn't have any place to put it. Now we do and the feature is in. You can take any brush you like and have it animate, move, spin and whatever else you like, across all of the frames.

SPECIAL D' EFFECTS

In the interests of brevity I'll leave the in-depth discussion of all the new animation controls for the next article and I'll discuss some of the new effects and modules here.

Lens Flare has been updated to add highly improved anti-aliasing and rendering, along with new controls for improving the light flare itself. The new Lens Flare effect can have more realistic light sources and can even rotate them so it can achieve 'Warp Drive' style effects.

Blob is a brand new effect that creates an oily, viscous blob on your image. It can be coloured, for that shimmering green slime effect you've been wanting for so long, and animated as well. It falls into the category of cool effects that have no immediate use unless you're doing music videos.

The Text Generator has had a huge overhaul to add great anti-aliasing, as well as *Postscript* font support and a new interface to give you much more control over the text and to allow you to preview the text you're entering directly over your image.

We've also added a Fireworks effect to allow you to simulate fireworks displays over your images and video sequences. It has many controls which can nearly all be ignored as it defaults to a rather nice fireworks effect immediately, which can actually change the effect from being a fireworks explosion to an explosion of any image or brush you like. You can even go from bombs to showers of coins.

HIDDEN GEMS

I'll close this column with a challenge. The current *ImageFX 3.2* has an Easter Egg in it. For the uninformed, an Easter Egg is a hidden method for bringing up a secret screen or something. *ImageFX 4* will have several Easter Eggs in it as well. No one has ever found the original Easter-Egg, but we're hoping that someone will find the new ones this time around. If you do, write in to the magazine address.

See you next issue, where I'll discuss the effects in more depth and show off some more screenshots and samples of them.



Workbench

Technical queries solved by **John Kennedy**. Email: amformat@futurenet.co.uk, putting Workbench in the subject line, or write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

ON THE OTHER SIDE OF THE WORLD...

I recently bought a Zip drive from HiSoft, even though I had to get an adaptor for the plug as England's sockets are different to Australia's. Unfortunately, I've been having a little bit of a problem with my Amiga since I've connected it and my Surf Squirrel up. Sometimes when I switch the computer on it doesn't boot up, and when it does it'll often crash and reload. Sometimes the whole display just freezes and I have to reset.

When I've tried backing up my HD to the Zip it seems like it's still writing to the Zip and has finished reading from the computer, but nothing is happening. There are times when it seems to freeze up just accessing the Zip from Workbench. Another problem, perhaps minor as I'm not overly worried about using it, is when I try to lock the disk with *Ziptools* that came with the Zip – it locks up my Workbench and the only thing I can do is reset the machine.

Stephen
via email

You've got it the wrong way round: Australia decided to make its mains sockets different from the eminently sensible, reliable and well-designed systems used in England and the rest of the UK and Ireland.

First thing to check is that you have the latest drivers for the Surf Squirrel. Check with HiSoft and the Aminet to make sure you're using the most up-to-date and 68030-compatible software. Try removing the accelerator card to see if that's stopping the Zip drive from working as that will give you useful clues as to where you should point the finger of suspicion.

COVER UP?

A few days ago I found out from some people on IRC that there's an Internet system that's many many times faster than ISDN. They sent me to http://www.cabledatacomnews.com/cmic/ where I found out about cable modems, whose lowest transfer speed is 500Kps through the CATV cable and an Ethernet card, with no call cost, just $40 to $60 per month. Why is this method so secret?

I presume that it's possible to do this on an Amiga with an Ariadne II. Why not do a feature on this in Amiga.net?

They peak at around 10MBps, a more realistic speed being 1-3MBps, meaning that despite the initial cost they would work out cheaper, with no dual line business like ISDN needs, and even at $60 per month it's far far better value than ISDN.

Thomas Braby
London

It's not secret, it's just not available in the UK. It's probably an ADSL derivative which uses the existing phone network to provide high speed – but shared – data to and from homes on a permanently online basis. BT are running trials of it in certain London boroughs at present.

Why assume that you can access it with an Ethernet card? You can't: it's not Ethernet, it's ADSL, two totally different technologies. At the moment a specific PC card is required and I doubt there's an Amiga version. Sorry, but it's still some time off before everyone can get access to cheap high-speed networking.

PATHETIC DOWNLOADS

I am on the net at last with free4all, thanks to you, but I can only connect via Miami at 9600/v42. I have a Speedcom 14400 modem but will be getting a 56K in about 10 weeks. The trouble is, I can't find a init string for my modem anywhere and the download time is just pathetic. Speedcom 28800 yes, but mine no. Can you help?

Steve Wright
via email

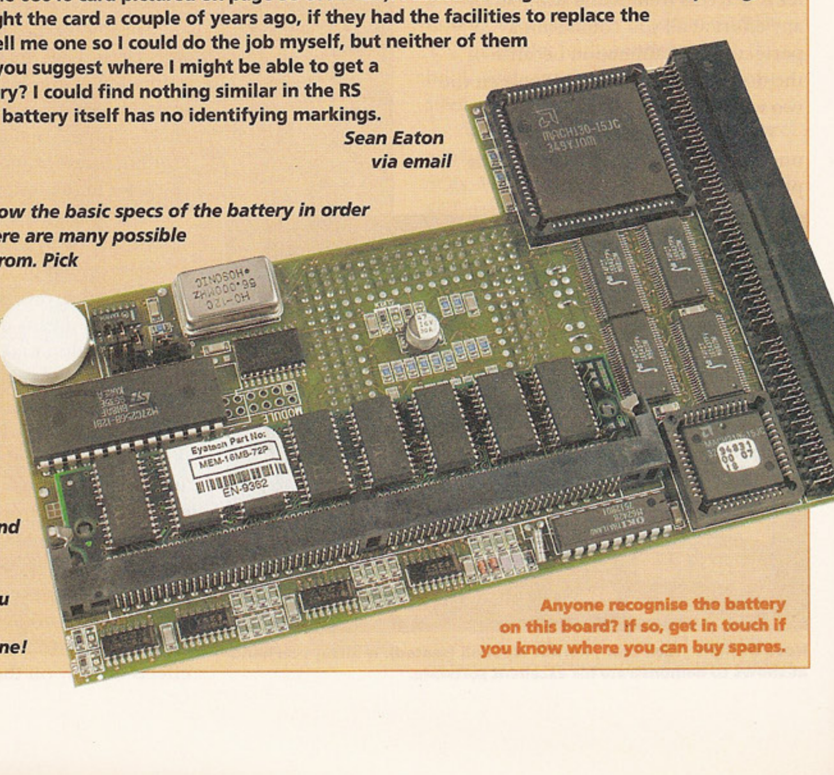
This doesn't sound like an init string problem. To be honest, most modems don't need any special init strings to work properly. Instead, just make sure that you've configured the serial port on the Amiga to work at a sensible speed: try it at 19,200 baud to start with.

MYSTERIOUS BATTERY

I own an Apollo 68040/40 accelerator. A couple of months ago the rechargeable battery on it failed and now it no longer holds its charge. This means that whenever I power up my A1200 the date is reset to January 1st, 1978 and I must manually change it. The battery is soldered directly to the board (it's the same type as on the 68040 card pictured on page 58 of *AF123*). I asked Analogic and Power Computing, from whom I bought the card a couple of years ago, if they had the facilities to replace the battery or could sell me one so I could do the job myself, but neither of them stock spares. Can you suggest where I might be able to get a replacement battery? I could find nothing similar in the RS catalogue and the battery itself has no identifying markings.

Sean Eaton
via email

It's essential to know the basic specs of the battery in order to replace it as there are many possible spares to choose from. Pick the wrong one and you risk damaging the card or even the Amiga. Sadly, I don't have that information to hand. Perhaps someone reading this will know the battery capacity and output, enabling you to buy a replacement. If you happen to know, please drop us a line!



Anyone recognise the battery on this board? If so, get in touch if you know where you can buy spares.

DEAD DRIVE

I have a hard drive problem. I have an A1200 with a Blizzard 1230/4, 32MB RAM, Workbench 3 and an unhappy 2.1GB Quantum hard drive which has had a pink fit. I turned the computer on one evening and nothing happened. The hard drive didn't even spin up so I whipped the case of and checked the connections, all of which were okay.

I then left the computer for a couple of days until I had time to look at it properly. Now when I turn it on the hard drive spins up and starts to access, I can hear it clicking, but it doesn't boot. Instead I get the insert boot disk screen. If I boot from floppy then the computer boots okay, but there are no hard drive partitions and *HDTools* can't find a hard drive on the interface at all.

The final symptom is slightly weird and worrying. When booting up and holding down both mouse buttons I don't get the early boot up selection screen. However, I can get the early screen up when the hard drive is disconnected. I've tried the drive in another A1200 and the symptoms are identical. Can you help?

Pete Jackson
Portsmouth

I think you can probably guess, can't you? The hard drive is broken. I was initially concerned that maybe there was a power problem, but if the drive does the same on another Amiga then that practically proves it. My only suggestion is to find a friendly PC owner and ask them to try the drive in their system. This is because I once had a hard drive which appeared to be as dead as a parrot (after I dropped it three feet onto a concrete floor – sorry Darren!), only to spring into life when used on the PC. Worth a try.

NO YAHOO? BOO!

Can I use my Amiga to go on Yahoo chat? If there's a program for it, what is it called and where do I get it? Also, I have an audio CD with a video on it (it says Apple *QT*). The problem is my *CyberQT* can't find it.

I'm running an A1200 Tower, Toshiba 2x speed CD-ROM, '030 GVP board with 4MB memory in total. For my Internet package I'm using *NetConnect 2* with *Miami* as TCP.

Matt Frow
via email

The problem is that the chat system probably uses Java *or* JavaScript. *In fact, it probably uses a full-blown* Java *application embedded in the web page, so while Amiga browsers can now use* JavaScript, *support for* Java *is a different matter. I'd stick with* IRC *or* ICQ *for the moment.*

If your drive is a dual speed, it's just possible that it's too old to cope with such data/audio format CD-ROMs and this might explain how it doesn't get found. It's also possible the file has an odd extension which CyberQT *isn't picking up, so copy it to your hard drive and rename it.*

SOUND AND VISION

1 Is it possible to modify any existing soundcard for the A1200 for use in the expansion slot of the CD32/SX-1?

2 I got a secondhand "PeggyPlus" MPEG coder/decoder Zorro II card, once made Ingenieur Helfrich. One of the original installation disks was damaged and so the card is basically useless, therefore I still have no idea as to what it can really do. Do you?

I tried contacting Helfrich but they don't seem to exist any more. Is there anyone at *AF* who may know where I could get the original software for this card? I'm also looking for the once-optional MPEG encoding software to go along with it.

3 I have an A4000T, '040/FPU, OS 3.1, NEC Multisync Monitor, Printiva 600c Printer (600x600dpi), and use *Draw Studio* plus *TurboPrint 5* for DTP. My only problem is that I can't achieve photo-quality printouts.

My dealer told me that it's the Printiva printer that's at fault because of the piezo-technology it uses. I use 24-bit colour mode in *Draw Studio* but the printouts just don't end up looking like what's on the screen. Do you know of anyone who gets photo-quality printing with their Amiga? If so, what set-up do they have?

Roy Crki
Switzerland

1 The soundcards I've seen used the A1200's Clock Port or a Zorro slot, neither of which will be of any use to you, I'm afraid. If you want to use the soundcard to play music, you're much better off heading into the world of MIDI.

2 The PeggyPlus was also sold under the brand of a Scala card and so maybe you can find the drivers that way. It sounds like a very neat card indeed. I found an excellent website with information on it here:
http://www.amigaworld.freeserve.co.uk/
and you should have a look if you can.

3 I don't have any experience with this particular printer but I do know that if you use models such as the Epson Stylus you can certainly get extremely high quality prints. Perhaps it's time for you to upgrade your printer?

If your printer isn't giving you the results you want, perhaps it's time to update it to a newer model like the Epson Stylus, shown here.



Feedback

Thanks for printing the inquiry I sent in (Music Master, *AF124*). Okay, I admit it, I'm a complete fool. I've looked just about everywhere I can think to look (various search engines, including ones that are Amiga specific, for *Bars & Pipes*, Blue Riband, Amiga music, etc) and I can find no trace of *Bars & Pipes*, freely available or otherwise.

Put an idiot out of his misery and point me in the right direction. I'd even settle for the actual web address.

Nimrod
via email

I didn't really want to spell it out as the copyright is actually a little hazy. However, you could try looking for it in a search engine like AltaVista.

Just a quick note about the comments by Jonathen Hayles in issue 124 regarding his problems with Freeserve. I had exactly the same trouble until two weeks ago when it got to the point where I couldn't connect at all for a week. I changed from *Miami* to *Genesis* and the problem vanished and I've been connecting first time, every time, so far.

It's really easy too – just stick the Freeserve phone number and your login ID/password into the *Genesis Wizard* and it does the rest for you! I still can't connect with *Miami* though, so I'm at a loss as to what's happening.

Igor
via email

Regarding James Potter and 'Don't Tell Me, Dead Disk'. I had exactly the same problem as James did: all IDE devices vanished. My hard drive was brand new, as were the Zip and CD drives, as well as the buffered interface. A few months after installation, poomph! Disappeared. I couldn't do anything to remedy it so I had to reformat the hard drive. Is this a problem with the buffered interface?

Paul Laycock
via email

It's possible that the interface is to blame I suppose: it would appear to be the common factor. There are thousands of these interfaces in use daily though, so I wouldn't want to write them all off. Anyone else have any similar system disasters ?

RECALCITRANT ROM DRIVE

I found a CD-ROM (Max 24x) cheap, but I can't seem to get it to work. I've tried connecting it with a 2.5–3.5–3.5 cable, but when I do use such cables the hard drive isn't recognised. I've tried every jumper setting on both the CD and the hard drive. The other alternative I have is an unbuffered IDE-splitter, but I don't know if it will be as useful as the buffered one. I was thinking of that

Continued overleaf ➡

Buddha card, but I've heard that it doesn't work particularly well with graphics cards and soundcards.

Jimmie Karlsson
via email

You should set up the hard drive as Master and the CD-ROM drive as Slave if you're using one IDE channel. If you have a buffer card with more than one, make each device a Master on its own channel. However, you won't be able to get the CD-ROM to work unless you have a program such as IDEFix, *so talk to Eyetech.*

DISK CONVERSIONS

I had an Amiga for over three years, an A500 and then an A1200, and I created many demos, animations and pics. Is it possible to convert them to my PC ? I'm desperate to transfer the pictures I drew in *Deluxe Paint 3* as there are over 60 and they're of a high standard. The only problem I have is that my disk drive is a hard drive and the Amiga disks are DS/DD disks.

George Dick
via email

If possible, save your pictures in a format such as JPG (with minimal compression) or GIF as this will make the transfer process a lot easier. Although some PC programs can cope with IFF, not all can, especially the HAM8 varieties. A program called Main Actor *can take ANIM files and turn them into PC-readable formats, and I'm sure there are other utilities which will do the same job.*

Physically moving the data will take time. A PC can read DS/DD disks fine, and so can your Amiga. The only problem is that they're limited to about 720K and you'll have a lot of carrying back and forward. Perhaps you should look at some of the networking solutions which use a parallel or serial cable to move data more quickly.

SORCERY PROBLEMS

I would be most grateful if you could give me an idea as to how to get *Simon The Sorcerer*, CD version, running on my A1200 with 4x SCSI external CD-ROM connected via a Surf Squirrel. Alive Mediasoft, who sold me the game, were very helpful in getting the speech to work by advising me to download the latest Surf Squirrel driver from http://www.hisoft.co.uk. However, the speech now skips a scene or two and then plays, or worse still, plays every single sound sample in turn when I click on an object with an action.

The game looks excellent and it's a shame I just can't quite play it. I have a GVP series II 68030 accelerator with 20MB RAM, an internal Power flicker fixer and scandoubler, 56K Dynalink modem on the Surf Squirrel serial port, a CDR single speed drive and an HP scanner on the SCSI chain, all of which are turned off when playing the game.

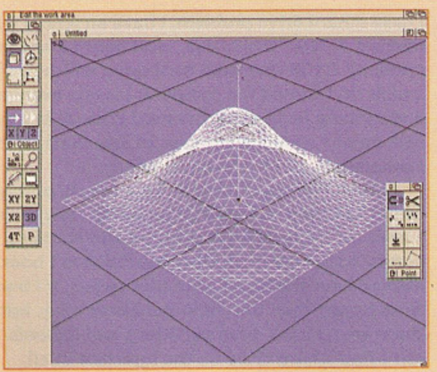
Bridge Deady
via email

AMIGAWRITER WRONG

I have an A1200, 560MB hard drive, Apollo 1230/40 accelerator, 16MB RAM and a 2x CD-ROM (Squirrel SCSI). The problems I have are with *AmigaWriter* – when I select it, all I get is the intro saying "Initialising GUI" and then nothing. Can you help me get it working?

My second problem is with *Cinema 4D* as all I get with this one is a requester asking for a serial number. I've looked through all the docs for it, and through *CU Amiga* (God rest their souls), but I can't find anything about it so I can't try out the program.

Lennie Lyon
via email



Cinema 4D is a cracking bit of software that you really ought to buy.

The best thing to do is run a program such as* SnoopDos *which will display the various libraries and files which* AmigaWriter *is accessing as it tries to start. Hopefully the last entry will make it clear as to why it's failing, and what you need to do about it. For example, you may need to install a particular version of a library or user interface utility.

Yes, CU did manage to give away a coverdisk which required a serial number, and then forgot to include it. There was a serial number for the package, but because it's so long since it was made available, I suggest you buy Cinema 4D directly from HiSoft – it's not exactly expensive now.

It's possible your accelerator card is messing up the software. The CD³² is 68020-based and some software doesn't like the speed increase offered by the 68030.

KALEIDOSCOPIC PROBLEM

Could you please explain a fault which occurs intermittently? The display disappears and is replaced with a kaleidoscope of animated lines and dots. The only cure is a reboot. Before installing the 4.3GB hard drive, the machine was fitted with a 2.5" 170MB hard drive as new. The fault still occurred so I assume the 3.5" hard drive isn't the problem. It occurs particularly when web browsing.

Craig Sears
via email

If only certain software causes it to happen, it's probably the software which is to blame. Try upgrading it. If it happens all by itself then it's a hardware problem, possibly the custom video hardware overheating and freaking out.

BATTLE OF THE BURNERS

I am thinking of purchasing a CD writer and want to know what the best CD-R software available is. I've seen three different programs, *Burnit*, *MakeCD* and *MasterISO*, and each claims to be the best. Which one is? I want to write my own data CDs, like you do at *AF*, in either Amiga or PC format, and I also wish to make my own music CDs with the help of a soundcard, such as Prelude. Also, did you ever publish a review on any or all of the above packages? In which issues of *AF*?

If you could send me some general info on each package, or if I need to buy a back copy of the mags then that's okay – just let me know which issues.

Jason
via email

Simon the Sorceror – looking good but sounding terrible...





We reviewed all the currently available soundcards for the A1200 in issues AF122 *and* AF123. *As for CD burning software, we've only ever reviewed* MakeCD *and* MasterISO *and they're both very good – they'll both do what you want when it comes to writing CDs for your Amiga.*

IF YOU HAVE A QUERY

We welcome your queries, but make sure you submit them correctly:

- **Send email to amformat@futurenet.co.uk with the subject "Workbench".**
- **Send letters to the usual *AF* address (it's on page 94 if you need it), and make sure you put "Workbench" on the envelope.**
- **Include details about your machine, such as what processor and how much RAM it has.**
- **Do your best to describe your problem succinctly.**
- **Make sure it wouldn't be easier to contact the dealer you bought the item from and ask them.**
- **Be concise!**



Creative

The indispensable guide to getting the most out of your Amiga

SEND IT IN!

WE NEED YOUR INPUT

Is there something you would like to be able to do with your Amiga but you don't know how? Perhaps you have an idea for a tutorial on a subject that you haven't seen *Amiga Format* cover before. If you can answer yes to either of these questions, why not write in and tell us?

PROGRAMMING

Loads of Amiga users like to create their own software. Do you need some help in this area? Perhaps there's a language that's giving you grief or maybe you want to know how to exploit some feature of the Amiga's Operating System. Let us know.

GRAPHICS

We all know the Amiga is a great tool for creating graphics, but how do you go about it? Is there a particular package you'd like some tips on? Get in touch at the following address:

AF Creative • 30 Monmouth Street • Bath • Somerset • BA1 2BW.
Email: richard.drummond@futurenet.co.uk
Remember to put "Creative" in the subject line.

There are two physical things in my life that have really bothered me: first, that my eyesight is as sharp as a myopic bat, and second, that I'm so un-photogenic it beggars belief. Worst of all, these two facts compound each other, as you can tell from my mugshot. At least it serves as a reminder to myself to order a replacement contact lens.

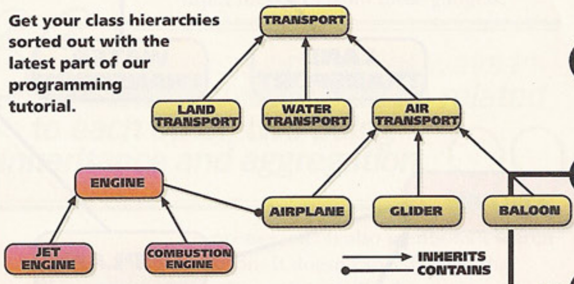
Apart from this one detail, our Col has done a splendid job of redecorating this page. Not only is it brighter, breezier and more colourful, it also requires a lot less work from me – just this box and a couple of captions. Nice one!

The latest addition to this section of the magazine is the Amiga.net tutorial. Our sharper readers may spot that it has made the trip from the Regulars section. This is not only because it's Ben's desire to rid the mag of what he calls 'that hideous orange colour', but we also happen to believe it fits in better here. Dave is starting from the beginning and will tell you all you need to know about getting your Amiga online.

The rest of this section is business as usual...



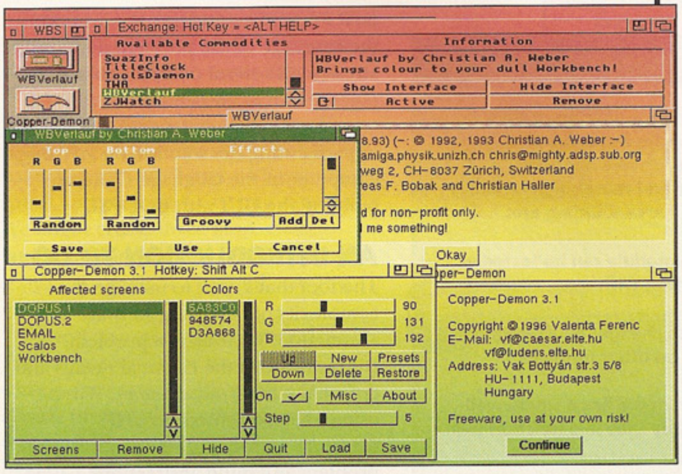
Richard Drummond



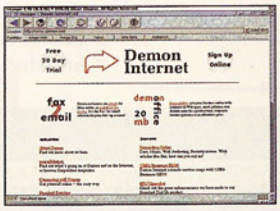
Get your class hierarchies sorted out with the latest part of our programming tutorial.

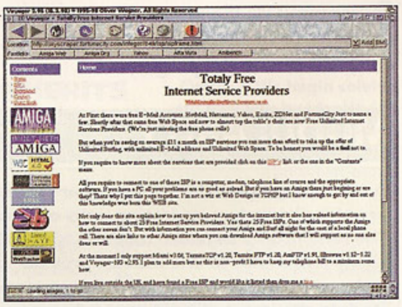


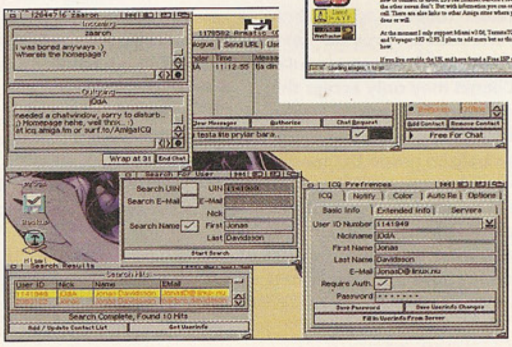
We've reached the point in ARexx where you should be able to automate fairly complex tasks.



Somewhere, over the rainbow... The copper is the Amiga's colourful co-processor.



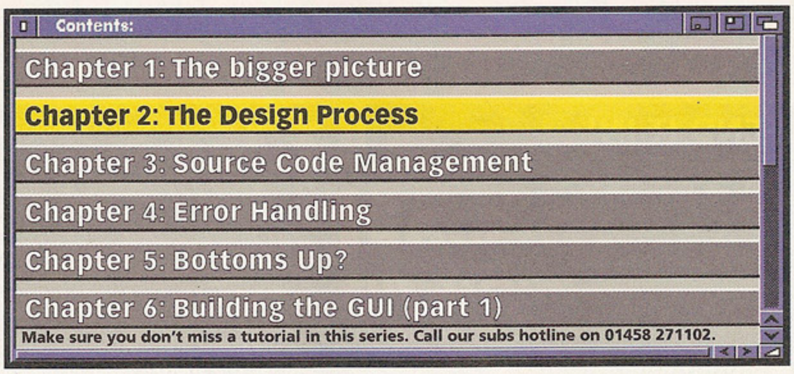




We give you the ABC of the Internet in our brand new Amiga.net tutorial.

Program Perfection

Richard Drummond continues his quest for that Holy Grail, the perfect program, and Orients his Objects.



The first instalment of this series set the stage for the *AFMore* project. In the coming issues we're going to follow its design and implementation, but before we go any further let's be a bit more concrete about the problem we're trying to solve by presenting a requirements specification. This is a natural language statement of exactly what we want the program to achieve.

> **"When using object oriented methods, we focus on the objects in the problem and build abstractions…"**

AFMore will display one ASCII file in one standard Amiga window. The name of the file to be displayed will be supplied on program startup by the user, either via a Workbench icon or via a CLI parameter. If no file is specified, the program will ask the user to select a file with a standard file requester.

Commands will be provided for scrolling and moving the portion of the file displayed in the window, searching the text for a particular pattern and selecting a part of the text, then copying it to the system clipboard. These commands will be initiated either by user input via the mouse or keyboard, or by ARexx commands which are sent to the program.

Example OO Hierarchy

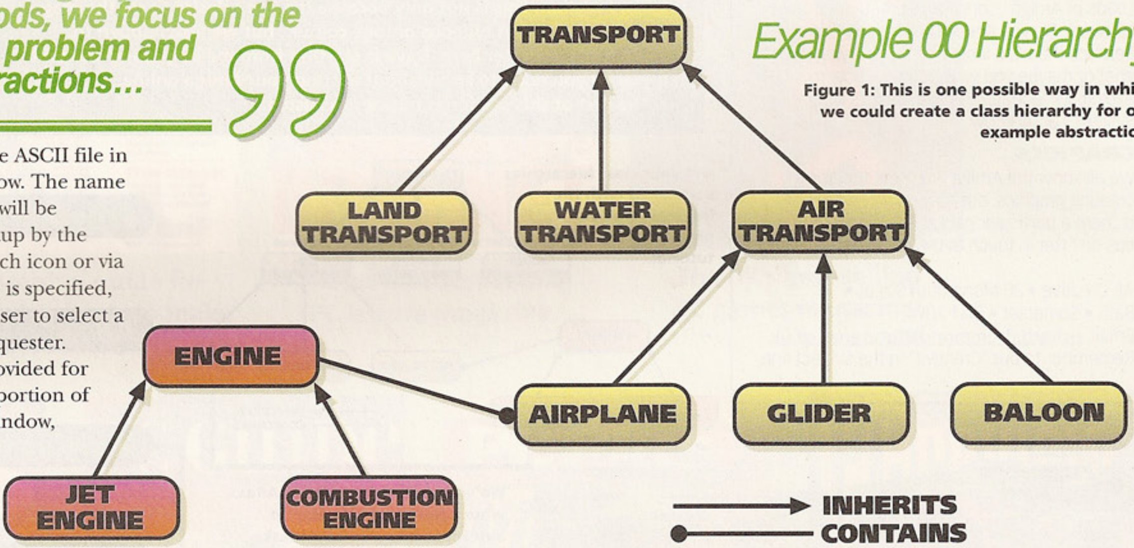


Figure 1: This is one possible way in which we could create a class hierarchy for our example abstraction.

The specification doesn't go into too much detail but we'll be able to flesh it out when we progress further into the design.

The first job is to analyse this problem to discover how we can solve it with a computer. Since *AFMore* is system software, this task is easier than it would be if we were creating an application; the language of the problem domain already talks about computer-based objects such as files and windows.

Also, we already know that we're implementing the solution on an Amiga computer in the language *C* and are building the GUI with BOOPSI.

MODULARITY

A modular program is one that's partitioned into a set of individual, co-operating units or modules. The relationship between modules is based on the client-server model: one module provides services to be used by the others. A module encapsulates its data structures. Clients may only access this data via the interface which is provided by the module's operations.

Two concepts can help us judge the modularity of a design: cohesion and coupling. Cohesion is a measure of the 'single-mindedness' of a module. It asks how well related the elements of a module are. Coupling is a measure of the independence of a module. To what extent does it rely on functions, data, etc, provided by another module? For example, global data and the sharing of data structures between modules increases coupling.

Modularity helps us achieve our goals of testability, extendibility and reusability. Modules with high cohesion and loose coupling are:

a) Easier to test, since a module can be tested in isolation and in integration with other modules.

b) Easier to extend, since changes to a module will have fewer side effects on other modules.

c) Easier to reuse – if a module has a single well-defined function, it's likely that this function will be needed again.

AN INTRODUCTION TO OO

The tool that's used to manage the complexity of designing software is abstraction. We look at a problem, concentrate on the essential details and ignore the insignificant ones. When using object-oriented (or OO) methods, we focus on the objects in the problem and build abstractions, called

The 'conventional' method

The complexity of designing software is managed by breaking down the problem into smaller chunks which are easier to solve, a classical divide and rule strategy. The traditional method, called functional decomposition or stepwise refinement, does this at procedural level. The program's task is refined into a sequence of more detailed tasks, then each of these is individually refined and so on. The process is continued until it reaches the point where each refinement is actually an instruction in the target computer language.

For example, a first level refinement of *AFMore* might be something like this:

```
Initialization
Get user options
Read text file
Open window
do
    Get input
    Update window
while input !=quit program
Close window
Clean up
```

This method has a number of shortcomings. Firstly, the first level decomposition is usually hard to produce because complex systems are difficult to characterise functionally. Indeed, the refinement listed above is rather ad hoc. Why did we choose this decomposition rather than any other? Secondly, this method treats the system data as second class to the algorithm. Programs perform operations on data; ignoring the latter will produce less than optimal solutions.

classes, around these objects. The class encapsulates the properties and state of an object which we call attributes. The attributes of an object may be modified from outside only by sending messages to that object, and the messages are sent by calling a member function of the class, called a method.

The key to OO is building a hierarchy of such classifications. There is a rich set of ways in which classes may be related to each other, two of the most important being inheritance and aggregation. Inheritance is essential to object orientation as it allows us to manage the possibly large number of abstractions in a problem more easily. Inheritance groups together classes with similar features. It defines a relationship where one class shares the structure or behaviour of another class. When one class inherits another, it specialises it.

As an example, suppose we wished to create an abstraction which models forms of transport. We might define a base class with attributes such as top speed and passenger carrying capacity. We might create three more classes – land transport, water transport and air transport – each of which inherits the general transport class.

Land transport could have extra attributes, such as the number of wheels, for example. We might wish to classify further, say by dividing air transport into airplane, glider and balloon classes. Each of these classes still has all the attributes and methods of the base class. It's important to remember that classes are abstractions. Airplane is a general type, while the Boeing 747 now landing at runway one at Heathrow is a concrete object, an instance of the airplane class.

Aggregation denotes a containment hierarchy; that is, one class has another class as a constituent part. Bearing in mind our transport example above, suppose we create an engine class. The airplane class would contain the engine class; all planes have engines after all. This is not inheritance, though. An engine is not a plane – they are quite different types of things.

OO AND AFMORE

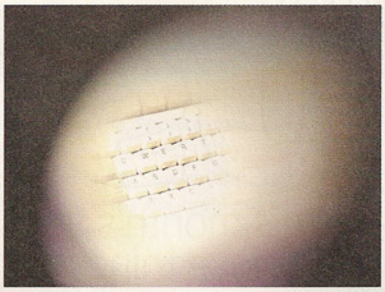
As I said before, we'll be implementing *AFMore* in *C*. *C* has no support for OO features like inheritance. However, we will be using BOOPSI for the user interface, which does. It therefore makes sense to apply some object technology to our problem.

First off, we'll scan through our requirements specification and see which objects turn up. Okay, it mentions a file, a window, the clipboard and a file requester. It says the program will receive ARexx commands so there must be an ARexx port. Presumably the window will have gadgets for the user to manipulate and a user port to receive input messages from these gadgets,

> "There is a rich set of ways in which classes may be related to each other, two being inheritance and aggregation."

keypresses, etc. It also mentions a search function. It doesn't specify what the interface will look like for this, but let's assume that it takes the form of a pop-up window which has a string gadget and a few buttons.

So we've got two windows, one to display the text and one to act as a requester for the search function. Both



of these objects are of the type 'window' and so will have common attributes. We can make a generalisation here by defining a window class that each of our two window classes will inherit. Likewise, the ARexx port and the window user port can inherit a more general message port class.

Take a look at Figure 2 which shows the links between the classes we've discussed so far.

It's good idea to make a list of the classes you identify as you progress and to write down their attributes and the operations you wish to perform on them. For example:

Class: Window
Attributes: Position (Left, Top), Size (Width, Height), Title
Methods: Open, Close

Class: TextWindow
Inherits: Window
Methods: ScrollTextUp, ScrollTextDown

It must be noted that this is by no means a final decision; it's a preliminary identification of the classes of object in the problem. No doubt we'll want to shift the boundaries and responsibilities of classes as we progress. We'll need to invent more classes and we'll want to re-use as many of the standard BOOPSI classes as possible.

That's about all we have time for this issue. Next time I'll elaborate further on what we've discussed here and I'll also be talking about source code style and management, which are very important topics to cover before we actually start implementing any code.

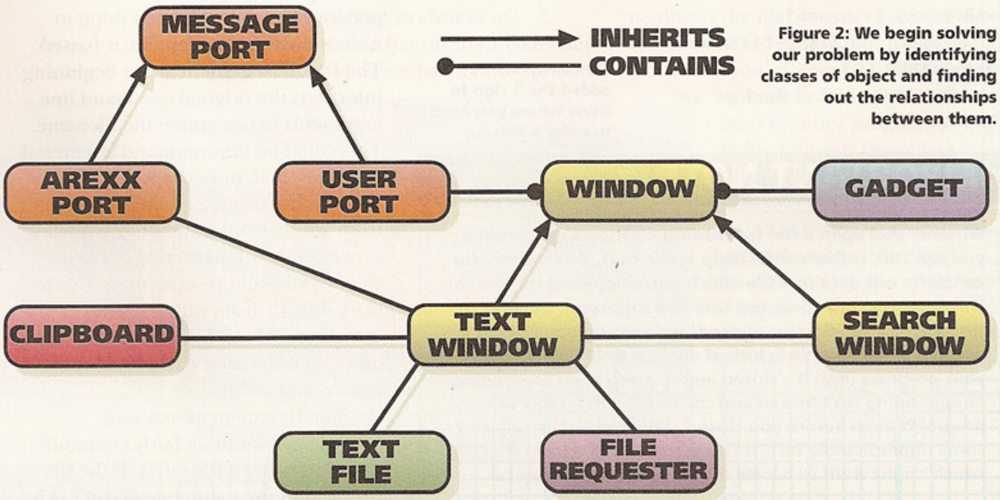


Figure 2: We begin solving our problem by identifying classes of object and finding out the relationships between them.

Useful ARexx

In this month's thrilling episode, Nick Veitch shows you how to open and close things.

We now know how to create very simple ARexx programs, but they aren't much use if they can't interact with other files and programs – that's the whole point of having a global macro language, after all. On the simplest level, it's often useful to create files for storing information. Such information might just be data for the script itself, or it could be some other sort of data which could be used by another application.

For example, last issue I showed you some code I used to parse HTML files and extract share data from them. The data itself was then reformatted to act as a data file for *Amishare*, a financial charting package.

> *If you wanted to get really clever, you could rewrite this script to work directly from within a word processor...*

There are thousands of such applications for ARexx scripts, but in order to write any of them you need to know how to open a file. Fortunately, ARexx makes this very easy. Here's a very simple script which takes an argument of a filename, then opens the file and counts the words it contains.

```
////wordcount example///¶

/*wordcount.RX ASCII text
wordcounter/*¶
/* Reads a file and counts how
many words are in it */¶

PARSE ARG filename¶
IF ~(open("infile", filename,
"R")) THEN DO¶
   SAY "File not found or is
locked"¶
   EXIT¶
END¶

wordcount = 0¶

DO UNTIL EOF("infile")¶
   input = READLN("infile")¶
   wordcount = wordcount +
WORDS(input)¶
END¶

SAY " The wordcount is "
wordcount¶
CLOSE("INFILE")¶

//////ends////¶
```

For clarity, we've added the ¶ sign to show where you need to enter a Return.

IMPORTANT NOTE

Whether you open a file for reading, writing or appending, you can still, rather confusingly, write to it. This means you can write out data to a file which you've opened for reading. This is pretty confusing, but there's a difference between a file open for reading (or appending) and one opened for writing. A Writing file is locked and can only be accessed by your program until it's closed again. A file open for reading or appending isn't locked and can be altered by any other programs even before you close it. This can be the cause of some unpredictable results if you have lots of tasks running which might want to access the same file, so be careful.

The script would be initiated with a command like:

```
RX wordcount.rx RAM:textfile¶
```

and then the program will open the file and read it all in, counting the words as it goes.

This script uses some of the techniques we've already come across in previous tutorials. The first thing to note is the way the filename is passed. The PARSE statement at the beginning interprets the original command line arguments to determine the filename. This could be the command as entered from the shell, or perhaps more usefully, the command could be issued from another program, such as a word processor. If you wanted to get really clever, you could re-write this script to work directly from within a word processor, although I can't think of any off-hand which don't already have a word count facility.

The IF statement may look complicated but it's a fairly common way of opening a file safely. If the file supplied in the pathname doesn't exist or can't be opened for some reason, this program will output an error message and will close nicely. There isn't anything in the rest of the program that would cause any damage to other files on your computer, but you can never be too careful.

The ARexx OPEN function is just like any other function and returns a value. If it has successfully opened the required file it returns the Boolean TRUE value, but it returns FALSE if the file can't be opened for whatever reason. In this example we've used a simple THEN DO structure to output an error message and exit the program.

The actual structure of the open function can seem a little confusing, but it's actually pretty simple when you get the hang of it.

```
Result = OPEN ( HANDLE, FILENAME,
MODE)¶
```

The result returns true or false depending on whether the file was successfully opened or not.

HANDLE is the filehandle, the unique name used to refer to this file in the rest of the program when reading or writing data to it. If you have more than one file open at once, they'll each need to have a handle. Think of it like a variable name which refers to the file.

The filename is the full filename, including the path, of where the file is to be found – in other words, its actual location on your Amiga.

The mode specifies whether the file is to be opened for reading ("R"), writing ("W") or appending ("A"). Reading and writing are obvious. Appending is exactly the same as reading, except that you're automatically positioned at the end of the file. You can then safely write to it,

Commands – quick reference

```
input = READLN("handle")
```
Reads in the next line of the file specified by handle. The input variable contains the characters read.

```
input = READCH("handle", length)
```
Reads in the next chunk of characters from the file. Length determines how many characters are read at a time.

```
result = WRITELN ("filename", output)
```
Writes a whole line (with a linefeed at the end) of characters contained in the string output to the file indicated by handle. Result will contain the number of actual characters written.

```
result = WRITECH("filename", output )
```
This is basically identical to the WRITELN() function, with the single exception that no linefeed is written at the end. Further output will be straight after these characters.
For example:
```
result = WRITECH("testfile", "ABC")
result = WRITECH("testfile","DEF")
```
will result in a line in the file consisting of ABCDEF, not:
ABC
DEF
as would be the case if we had used WRITELN() instead.

```
result = OPEN("handle","path", mode)
```
Handle is the name of this input/output stream, ie, the name used to refer to the file internally in the READLN() commands, etc.
Path is the actual path and filename of the file. For example, "RAM:temp/testfile".
Mode is "R" for reading , "A" for append or "W" for writing. Result is the result of the action. It will return false if the file could not be opened – for example, if the file or device did not exist.

```
SEEK(handle, offset, anchor)
```
Where handle is the file handle, offset is a numerical offset from the anchor point, and the anchor is one of either BEGINNING, END or CURRENT, representing the start, end or current position in the file. CURRENT is the default value and will be used if you don't actually specify a value.

This function has two main uses. The obvious one is to move around in the file. For example, halfway through writing a file you could use:

```
SEEK ("handle",0,BEGINNING)
```
to move back to the beginning and start overwriting whatever was there.

The other use is to find out where in the file you are, as SEEK returns a value of the old file position. Thus:

```
current_position = SEEK ("handle",0)
```
will return the current position value in the variable, which could be extremely handy if you need to write to another part of the file and then come back.

```
EOF()
```
Returns a boolean value which is true if the end of file has been reached. This is most commonly used in loops.

knowing that you're adding things on to the end of the file.

After initialising our wordcount variable, the next important part of the program is the next DO statement.

```
Do until EOF("infile")¶
```

This uses the EOF function to control the completion of the loop. Once again this is a boolean function which will return TRUE when any action returns an EOF marker. EOF stands for End Of File, and quite simply it becomes true when you read the last line in the file.

In this structure there's no need to know in advance how big the file is going to be – we can happily just keep on reading line after line of data, safe in the knowledge that we'll stop when we get to the end.

The first line inside the loop reads an entire line of the file and assigns its value to the input variable. ARexx can read files a line or a character at a time. Lines are marked by linefeed characters in the actual file. Reading, and indeed writing, whole lines at a time is often

> **Appending is the same as reading, except you're automatically positioned at the end of the file...**

more convenient than reading single character values or specified lengths, especially when you're dealing with text.

Data can obviously be stored in files this way too, which makes it much easier for ARexx programs to deal with. The program would be a lot bigger if we had to read everything in chunks of characters and either decide a character at a time whether we had a new word on our hands, or concentrate the whole thing into a larger string and then count the words. Unlike the other file functions, all the reading and writing functions return proper values, giving the number of characters written or the actual characters read.

Having read the line in, we use the special ARexx function WORDS() to count the number of individual words on that line. I told you ARexx had loads of useful functions built in! Finally, when the loop has finished, we SAY the result of our little wordcount routine.

The last line of the program is very important. The CLOSE statement doesn't return any values, it simply closes the file. This allows ARexx to know that that particular file handle is no longer in use by the program, and neither is the file. This isn't so critical for files you're reading, but if you don't close a file you've opened for writing, it will still be locked and can't be used by other programs, which kind of defeats the object. Always close files when you've finished with them.



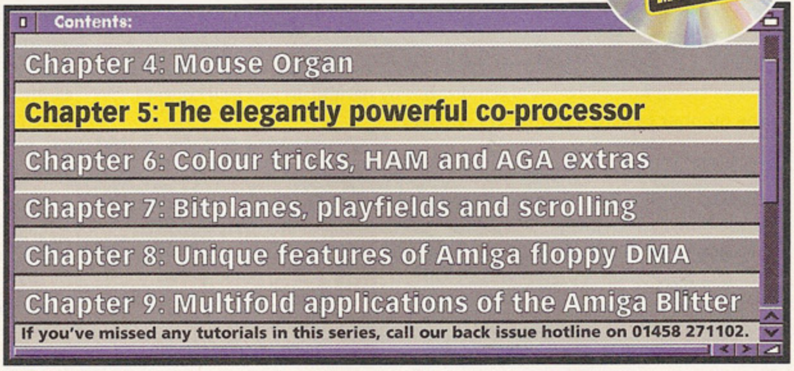
That just about wraps it up for basic file handling. There are a lot of useful things you can do with files. Why don't you experiment by writing a few file handling programs of your own until next issue? As ever, if you have any questions, please send them to us at the normal Workbench address.

Banging the Metal

Simon Goodwin delves deep into the Amiga's custom Copper co-processor.

AFCD42:-In_the_Mag-/Banging_The_Metal





The test of a 'RISC' processor is the Reduction of its InStruCtion set, which makes the Amiga's display CO-ProcEssoR or 'Copper' the risciest around. It's a true processor, capable of loops, conditional tests, memory transfers and logical operations, yet it has just three instructions: MOVE, WAIT and SKIP.

These derive power from the other parts of the custom chip set, which are the target for MOVEs. The unique strengths of the Copper come from the SKIPs and WAITs, which allow exact synchronisation of the program, known as a Copper List, with the beam scanning the Amiga display. SKIP allows conditional execution, depending on the beam position. The next instruction is SKIPed if a position has already been passed.

> **Synchronisation means the Amiga can change colours, resolution and other display attributes with pixel accuracy.**

COPPER LISTS

Every screen the Amiga displays has an associated Copper List. The contents of that list correspond to the display format – its size, resolution, position and colours. MOVE instructions tell the other custom chips where to find display data and how to display it. Synchronisation means the Amiga can change colours, resolution and other display attributes with pixel accuracy.

In future issues we'll reveal all the hardware that the Copper can control, including the colour palette, scrolling playfields, moving 'sprite' patterns on top of the main display, and the equally important 'Blitter' co-processor. The Amiga's parts are closely coupled and make best sense as they were designed – as a whole. The Copper deserves early attention because it's simple but subtly powerful. By the end of this series we'll be using the Blitter to program the Copper to program the Blitter!

COPPER STRIPES

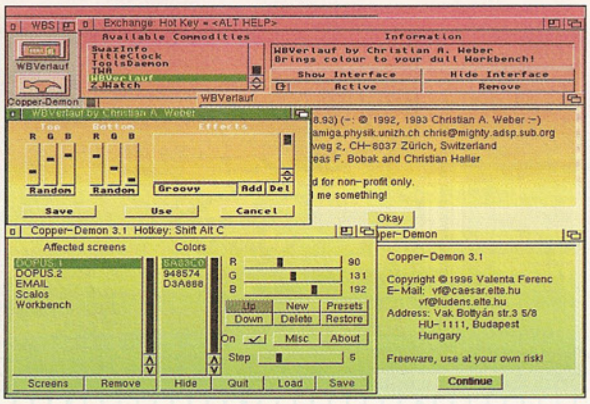
We'll start with a simple example. Commodities like *Copper Demon* and *WBVerlauf* give AGA screens a smoothly graduated colour background without requiring extra display planes. The command STRIPES does a similar trick for old Amigas, though less smoothly. You can have hundreds of colours on screen while still using a fast 'four-colour' Workbench, consuming just two planes of display memory.

The Copper does this by inserting WAIT and MOVE instructions to change the colour of the background on each display line. This consumes negligible processing time because once the WAIT has been read, the Copper snoozes until the beam reaches the required co-ordinates.

Processing starts at the beginning of the list as each new display is scanned from the top. The Copper can move new values into 'Jump' registers, changing its own program from one display field to the next. Among other things, this is how interlaced displays are made.

The Copper can split screens into areas or 'slices' with contrasting colours and modes. You can see this in many games, and when you drag screens with the mouse. It's particularly impressive when screens differ in resolution and include draggable colour stripes.

Multi-player games use the Copper to divide the screen into sections with independently-scrolling contents. They can re-use sprites so that channels used for moving monsters at the top of this screen might form an overlaid scoreboard at the bottom. The Copper re-programs the sprite engine to put up a new pattern, with unique size, colours and location, as soon as the last scan line of the previous usage has passed.



Copper stripes embellish this 'eight-colour' screen.

The Copper can program the Blitter to start it as soon as a position on the screen has been reached, and so it ensures that display updates are never disturbed by the beam, giving a jagged display, mixing old and new data. The Copper can also toggle sound and custom Amiga features. It can even trigger interrupts to the main processor, synchronising complex operations like animation and file handling.

DISASSEMBLER

The Copper list disassembler is written in *HiSoft BASIC*. It finds and decodes the current Copper list, identifying custom chip registers by name. It formats values as RGB colours, low resolution display co-ordinates, bytes, nybbles or bit patterns, depending on their destination.

Custom chip register names match those used in Commodore documentation and are explained in this series. The disassembler finds the current Copper List from the system GraphicsBase structure. Select other display modes to see the difference. This issue's *AFCD* includes example output and versions that write to the screen or to a file.

EXAMPLE LIST

The example shows a standard four-colour AGA Copper List, plus one colour-change part way down the screen. The first instruction WAITs until the beam reaches the 23rd scan line, high in the border, shortly before the active part of the display is generated.

The next 10 instructions set up four screen colours for background, dark,

EXAMPLE COPPER LIST

The Copper List for an AGA four-colour Multiscan display.

```
WAIT for Y=23  X=0
MOVE %0000 1100 1000 0011 to BPLCON3
MOVE R=9 G=9 B=9 to COLOUR 0
MOVE R=0 G=0 B=0 to COLOUR 1
MOVE R=15 G=15 B=15 to COLOUR 2
MOVE R=2 G=5 B=2 to COLOUR 3
MOVE %0000 1110 1000 0011 to BPLCON3
MOVE R=5 G=5 B=5 to COLOUR 0
MOVE R=0 G=0 B=0 to COLOUR 1
MOVE R=15 G=15 B=15 to COLOUR 2
MOVE R=13 G=8 B=9 to COLOUR 3
MOVE 0 , 1 , 1 to BPLCON4
MOVE (X= 81 ,Y= 25 ) to DIWSTART
MOVE %0010 0010 0100 0001 to BPLCON0
MOVE %0000 0010 0010 0100 to BPLCON2
MOVE %0000 1100 1000 0011 to BPLCON3
MOVE (X= 245 ,Y= 249 ) to DIWSTOP
MOVE (X= 32 ,Y= 0 ) to DDFSTART
MOVE (X= 112 ,Y= 0 ) to DDFSTOP
MOVE %0 to BPLCON1
MOVE 88 to BPL1MOD
MOVE 88 to BPL0MOD
MOVE 3 to BPL1PTH
MOVE 608 to BPL1PTL
MOVE 3 to BPL2PTH
MOVE 696 to BPL2PTL
MOVE %0000 0001 0000 0000 to DIWHIGH
MOVE %1000 0000 0000 0011 to FMODE
WAIT for Y=200  X=0
MOVE R = 5 G = 6 B = 4 to COLOUR 0
MOVE %0000 1110 1000 0011 to BPLCON3
MOVE R = 10 G = 9 B = 11 to COLOUR 0
WAIT for Y=255  X=254
```

Note: sprite colour settings have been omitted for clarity.

Basic Copper Disassembler

This disassembler decodes Copper Lists into symbolic form.

```
' HiSoft BASIC $VER: Copper List disassembler  2.2 SNG 21 May 1999
WINDOW 1," AGA Copper Disassembler",(20,16)-(600,380),1+2+4+16+256
LIBRARY OPEN"graphics.library":gfxbase&=LIBRARY("graphics.library")
c&=PEEKL(gfxbase&+50) : REM Find long Frame Copper list in GFXBASE
REPeat dis
  w1%=PEEKW(c&) : w2%=PEEKW(c&+2) : PRINT c&,
  IF w1% AND 1
    IF w2% AND 1 THEN PRINT "SKIP to "; ELSE PRINT "WAIT for";
    PRINT " Y =";PEEK(c&);" X =";(PEEK(c&+1) AND 254);
    IF (w2% AND 32766)<>32766 THEN PRINT "& %";BIN$(w2% AND 32766);
    PRINT
  ELSE
    IF w1% AND (&hFE01-65536)
    PRINT " Bad MOVE";FN POS&(w2%);"to ";FN POS&(w1%)
  ELSE
    PRINT "MOVE "; : SELECT ON w1%
      =142 TO 148
        PRINT "(X=";PEEK(c&+3);",Y=";PEEK(c&+2);") to ";
      IF w1%>144 THEN PRINT "DDF"; : ELSE PRINT "DIW";
      IF w1% AND 2 THEN PRINT "START" : ELSE PRINT "STOP"
      =224 TO 254
        PRINT FN POS&(w2%);"to BPL";CHR$(49+(w1% AND 28)\4);
      IF w1% AND 2 THEN PRINT "PTL" : ELSE PRINT "PTH"
      =256 TO 262
        PRINT "%";BIN$(w2%);" to BPLCON";CHR$(48+((w1%-256)\2))
      =264 TO 266
        PRINT w2%;"to BPL";CHR$(49+((w1% AND 2)=2));"MOD"
      =268: PRINT PEEK(c&+2);"," ;(PEEK(c&+3)\16);
        PRINT ",";(PEEK(c&+3) AND 15);"to BPLCON4"
      =288 TO 318
        PRINT FN POS&(w2%);"to SPR";CHR$(48+(w1% AND 28)\4);
      IF w1% AND 2 THEN PRINT "PTL" : ELSE PRINT "PTH"
      =384 TO 446: PRINT "R =";(w2%\256);:REM Palette change
        PRINT "G =";((w2% AND 240)\16);"B =";(w2% AND 15);
        PRINT "to COLOUR";((w1%-384)\2)
      =484: PRINT "%";BIN$(w2%);" to DIWHIGH"
      =508: PRINT "%";BIN$(w2%);" to FMODE"
      =REMAINDER: PRINT FN POS&(w2%);"to'$";HEX$(w1%)
    END SELect
  END IF
END IF : c&=c&+4
IF w1%=-1 AND w2%=-2 THEN PRINT " End of Copper List" : EXIT dis
END REPEAT dis : STOP
DEF FN POS&(t%)=-t%*(t%>=0)-(t%<0)*(65536+t%) ' REM Unsigned word
```

light and active items. Old Amigas use just four instructions to set the colours but the 24-bit AGA palette is programmed in two steps. Each MOVE can transfer up to 16 bits of data. OCS and ECS Amigas support 4,096 colours, using four bits for each proportion of red, blue and green (0-15) in a given hue.

AGA supports 16 million colours, which is more than a single MOVE can select, so register BPLCON3 directs colour changes to the most (%110010000011) or least (%111010000011) significant bits. The AGA-only register BPLCON4 selects between sets of colours. Next month we'll learn more about these little-known features. MOVEs that set the Pointer colours have been removed to save space – they're similar to those for the playfield colours but they set other palette registers. The next line sets the display position (DIWSTART), altering as you move the window around with Overscan preferences.

MOVEs to BPLCON (BitPLane CONtrol) registers determine the display mode. This value of BPLCON0 selects four-colour, SuperHiRes, AGA mode. BPLCON1 and 2 set defaults for compatibility with other modes, and the third MOVE to BPLCON3 again switches the palette bank.

The DIsplay Window (DIW) and Display Data Fetch (DDF) are set separately to allow scrolling displays. The MOVE to DIWSTOP positions the lower right-hand corner of the display, while DDFSTART and DDFSTOP determine the start and end of Display Data Fetches. BPLxMOD settings tell the Amiga the interval between display lines (or MODulo) in bytes. This 88-byte modulo allows bitplanes to be interleaved in memory, which is very convenient when blitting.

BPLxPTR registers indicate the start address of the display memory for each BitPLane. Again the values are too big for a single 16-bit MOVE, so one sets the High word of the PoinTer (PTH) and another sets the PoinTer's Low word (PTL). Bitplane 1 starts at 3*65536+608 = address 197216, and Bitplane 2 follows 88 bytes later, matching the modulos.

DIWHIGH sets extra bits added for bigger ECS displays. FMODE selects 64-bit AGA fetches for the display data, at a speed four times faster than OCS or ECS could manage. For the time being, it's enough to know that the Copper controls these. Mixed-mode screens use a WAIT and then more MOVEs to change these registers.

The penultimate WAIT instruction in the example determines the position of the colour change on the screen, in the border of line 200 (WAIT for Y=200, X=0). After that, a COLOUR0 is changed in two steps for the full 24-bit effect. Copper lists on the *AFCD* include many such WAIT and MOVE combinations, giving smooth colour stripes like those in the example screen. The last WAIT lets the Copper idle until the end of the field.

NEXT ISSUE

Bitplanes, sprites, and Blitter operations will be explained in future tutorials. In the next issue we'll be looking in detail at the colour palette.

I'll show you exactly how Commodore managed to shoehorn 24-bit, 256-colour AGA registers into the same space as the 32 registers of 12-bit colour on early Amigas, and I'll also be exploring some of the unique Amiga modes, such as HAM6 and HAM8, which offer lots of colours without wasting memory.

Amiga.net

Dave Cusick discusses the various ways of getting online.

NEW Tutorial

Contents:

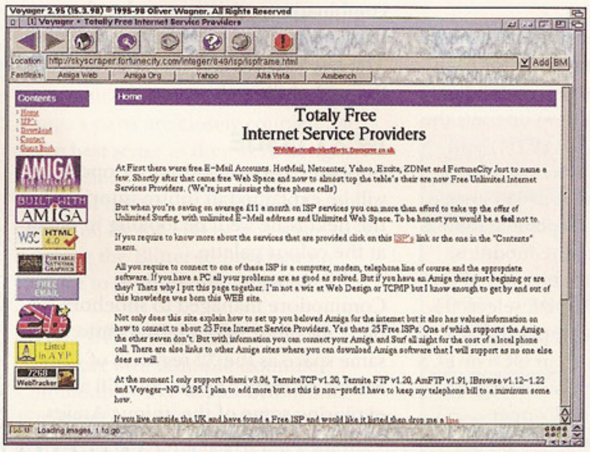
Make sure you don't miss a tutorial in this series. Call our subs hotline on 01458 271102.

Once upon a time you couldn't get online with your Amiga without grappling with the complex beast that was the early *AmiTCP*. Nowadays, the likes of *Miami* and *Genesis* have made it an absolute doddle to get online; with either of these packages, all you need is a modem and an account with an Internet Service Provider and you can be surfing the net in minutes.

> The growth of free ISPs has been flabbergasting, and the number of people online in the UK has rocketed as a result.

Until last summer, choosing an Internet Service Provider was a relatively straightforward decision – you would probably have a good ISP recommended to you by a friend, so you would ring the company up and open an account, for which you would pay a monthly fee. They would provide you with unlimited access to the Internet in return, but you would also have to pay your telephone company for any calls made to the ISP, usually at local rate.

Then towards the end of 1998, free ISPs came onto the scene. Their growth, led by the phenomenally successful Dixons FreeServe, has been nothing short of flabbergasting, and the number of people online in the UK has rocketed as a result.



Details on various free ISPs are available at: http://skyscraper.fortunecity.com/integer/849/isp/ispframe.html

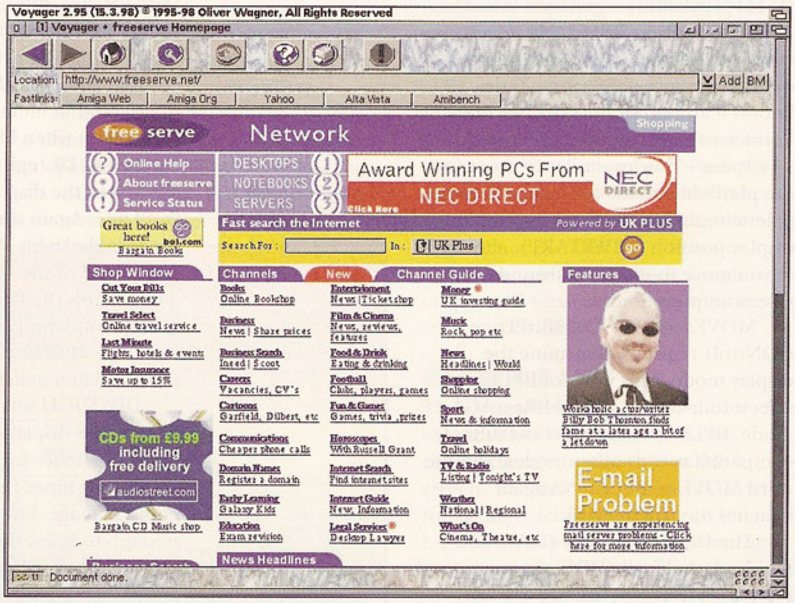
Of course, free ISPs aren't actually free as they take a small percentage of the fee you pay to the telephone company when you ring their 0845 access numbers. But to all intents and purposes, what the user gets is access to the Internet, one or more email addresses and a chunk of web space, without having to pay any more than the cost of local rate telephone calls to the service provider. It's not hard to see why free ISPs have tempted many people who were always put off by the thought of monthly fees to finally make the jump onto the Internet.

LOOKING AHEAD

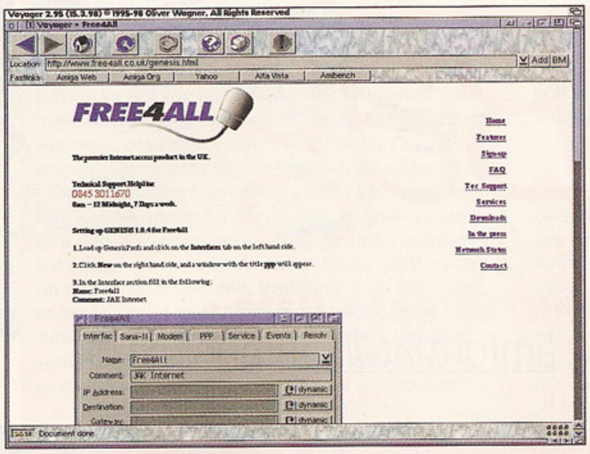
Things may change again in the very near future. Many of the larger traditional service providers, who still charge monthly flat fees for their services, are convinced that free ISPs won't survive for long because sooner or later BT will be forced to stop charging for local area calls. If this were to happen, of course, free ISPs would instantly lose their primary source of income. Bigger free ISPs like FreeServe also gain some income from selling advertising banners on their site, but there's no way that this income could support the operation on its own – FreeServe now has well over a million users to keep happy.

Several months ago, I explained in the Amiga.net column how you can get online using FreeServe, because even though the FreeServe CD you get from Dixons only contains PC software, it's not particularly difficult to sign up and use it on an Amiga.

Unfortunately, however, it seems



FreeServe is the biggest and best-known of the free ISPs.



Free4all is a free ISP which offers Amiga-specific technical support.

that things have changed in recent months, and I've been receiving a steady stream of emails saying that *Miami* and now *Genesis* seem to be having trouble connecting to FreeServe. Possibly something has changed at the FreeServe end of things, but it's probably just as likely that Freeserve is having problems handling the amount of connections it's receiving and TCP stacks are finding it impossible to establish a reliable connection. The solution to this is for them to just keep trying until they can, possibly at quieter times of the day.

The current situation is that if you want free Internet access from your Amiga, there's no shortage of choice – there are literally dozens of companies who offer services which can be made to work perfectly well on the Amiga. However, if you want to be sure that a FreeServe-type situation doesn't force you to switch services at some point, your best bet is to go for a provider which actually acknowledges the existence of the Amiga.

As far as I'm aware, the only free ISP which currently offers Amiga technical support is Free4all. If you already have net access, you can sign up online at http://www.free4all.co.uk where you'll also find full instructions for configuring your TCP/IP stack appropriately. Otherwise, you can contact Free4all on 01303 775500.

WHY PAY?

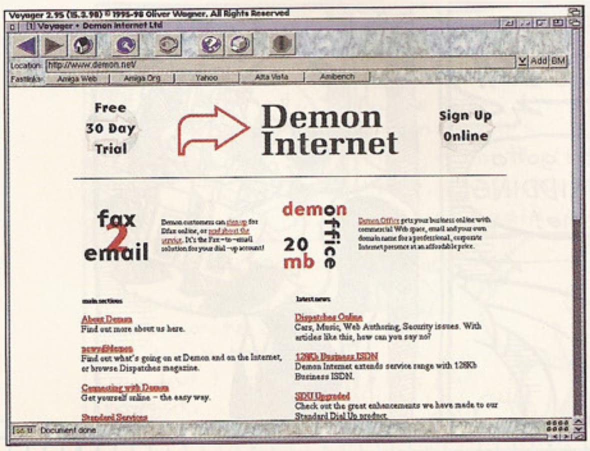
Like many long-term net users, I personally have no intention of stopping paying my monthly fee to my traditional service provider. Aside from the fact that I'm happy with the standard of service I receive, it does seem as though sooner or later free local calls will arrive and the only charge for accessing the Internet will be the monthly flat rate. For heavy net users like me, such a situation will be infinitely preferable to having an account with a free ISP but still having to pay for telephone calls.

As if to pre-empt any possible move to free local calls, several companies have begun trials of free net access via 0800 numbers. Indeed, AOL, the online service giant of the PC world, is currently testing 0800 access. It seems that many larger traditional service providers will follow at some point.

Another thing which you should be aware of if you sign up with a free service provider is that there are now so many companies offering free services it seems inevitable that not all of them will survive. More to the point, only those free ISPs with a huge number of subscribers or a traditional fee-based ISP to back them up will be able to invest sufficient money into maintaining and improving their service.

Many people have found that free ISP access speeds can be disappointing compared to those offered by traditional ISPs, and the bottom line is that you generally get what you pay for. Those who thought that the arrival of free ISPs would spell the end of traditional ISPs were clearly talking rubbish; there will doubtless be a few casualties, but good, fast, reliable access and extra services will mean that the best, traditional ISPs are going to flourish.

Large, traditional ISPs like Demon are confident that free ISPs won't cause them to lose significant numbers of subscribers.





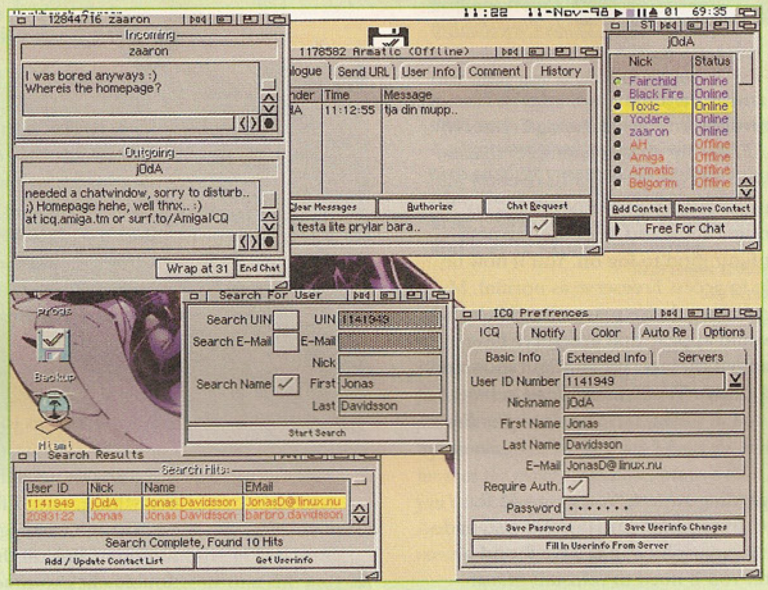
There is a large list of traditional pay-for-access ISPs at: http://thelist.internet.com/countrycode/44/

NEW ICQ

I've focused on efforts to port the popular PC and Mac instant messaging program *ICQ* to the Amiga before in these pages, and part four of this series will take a good look at what the Amiga *ICQ* clients can do and how you can get the most out of them. If you've been online for a while and don't want to wait, you'll be pleased to know that a new version of the popular *ICQ*-compatible instant messaging client *StrICQ* has been released.

Version 0.1408 features a number of important bug-fixes, not least of these being the fact that *ICQ* users on PCs can finally see when *StrICQ* users are online; previously, *StrICQ* users would be listed as offline until they said something.

***StrICQ* is the most fully-featured of the various Amiga *ICQ* clones, and it really is worth getting hold of. Nip along to the Amiga *ICQ* page at http://surf.to/amigaicq or the official *StrICQ* homepage at http://owlnet.net/amiga/stricq/ and download yourself a copy now.**



StrICQ is the best *ICQ* clone on the Amiga.



MailBag



Send your letters to: **Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW** or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

SPARE US	SEND US
• Long letters with loads of points.	What you want to see in OS3.5. •
• Complaints that *AFCDFind* and *AFCDView* don't work without any info as to why.	Whether you'll pay a deposit for one • of phase 5's new accelerators.
• Your missives on why company X should port their latest PSX/PC title to the Amiga.	Your ideas for the shape of the • Amiga's future.
• Letters asking for Richard's job.	General questions you want answered • (not technical ones – that's what Workbench is for!).
• Technical questions which should be addressed to Workbench.	

HELP FOR FREE

In answer to Jonathan Hayles' letter regarding trouble accessing Freeserve in *AF124*, the answer is simple: re-run *MiamiInit* (*Genesis Wizard*), re-enter all your details, save your new configuration and then use the new configuration to log on. You'll now be able to access Freeserve as normal. My highly speculative reason for this is that it would appear that Freeserve have changed their server configuration and this causes *Genesis* and *Miami* to hang.

Jim Brown
via email

Regarding *AF124*, 'You get nowt for free' from Jonathan Hayles, I also had the same problem but have found a cure. You'll need to reinstall *Miami* from the start (*Miami Init*). I did this and it now works every time. The version of *Miami* I use is 3.2b (09.11.98). I hope this helps.

Dave
via email

After following your guidelines for connecting up to Freeserve in one of your recent articles, I've enjoyed many hours of surfing. However, the other day my connection through *Genesis* failed, and after many hours (and arguments with my father) I still couldn't get it to work. This problem had been creeping up on us for while now and it seemed that it was just a matter of luck as to when it would connect, but now it just wouldn't have it. I tore out my hair, wept and did everything, until I found the answer.

Using *Genesis*, go to the Prefs settings. Click on the interface bar, double click your account and then click on the MODE tab. Remove all the script apart from Dial & GoOnline. Leave your provider info alone as that needs to be there. Now click the PPP tab, tick Carrier Detect and also Use DNS address. All the others should be off, depending on your setup.

Finally, click the Resolv tab and check both Query Hostname & Query Domainname. Click okay, save and now try reconnecting and it should all go fine and dandy. I hope this solves any problems that you may have been having. It certainly has done at this end. Connection also now only takes a fraction of the time it used to.

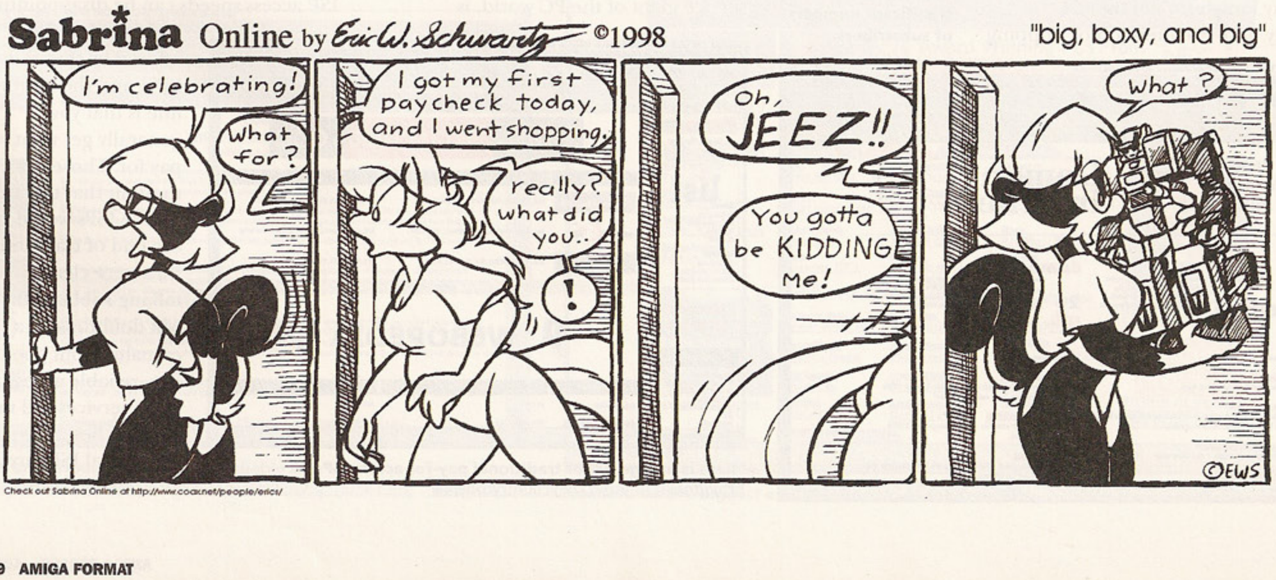
I can be contacted by email at: tony@totemimaging.freeserve.co.uk or through my homepage, which you are welcome to visit, where comments are gladly appreciated: http://www.totemimaging.freeserve.co.uk

Tony
via email

On the very weekend I received the issue of *Amiga Format* containing my letter complaining about Freeserve, I managed to get through to Freeserve instantly, without any problems, and have done ever since. Spooky.

Jonathan Hayles
via email

Well, this long litany of letters with regard to Freeserve is bound to continue. I guess next month we'll have some people complaining about the fact that the Freeserve mail servers were recently down for the best part of a weekend.



Check out Sabrina Online at http://www.coax.net/people/lerics/

AMIGA SUPERIOR TO PC SHOCK!

I'd like to tell you something that happened the other week while I was on IRC, in a channel where everyone uses a PC except me. The channel was moving along with two or three chatting and the rest either doing something else or just watching. One person apologised for taking a while to reply to a question because, almost in a smug voice, said that they were in two rooms at the same time and on *ICQ* as well. I replied, sounding even smugger, so what, I'm at two different websites at the same time, on IRC in three different channels, sending some large emails on *ICQ* (*strICQ*) and uploading new pictures for my website to my web server.

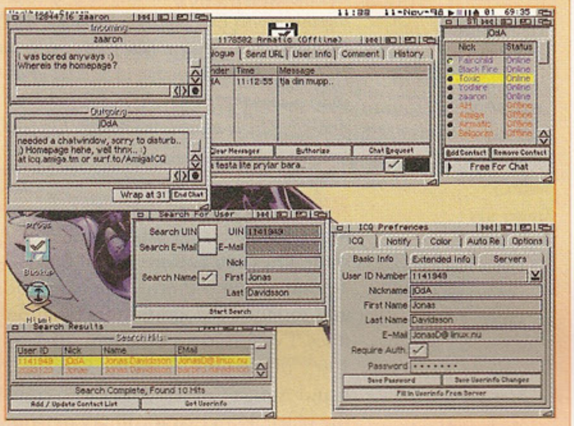
I actually was doing all this right then. Anyway, suddenly the channel came alive and everyone wanted to know what computer I had. Someone suggested it must be a Pentium 3. No, I said with a very big smile, I've got an Amiga.

Needless to say, my Amiga gets a lot more respect now, but this got me thinking. The first thing was, it crystallised in my mind how PC users perceive MHz or size generally with what a computer can do. Secondly, if someone says that they're thinking of getting a computer, it means a PC – well, there really isn't an alternative. However, if the next generation Amiga does turn out to be able to really do things that a PC can't, it will grab the attention of everyone because of it. Then there really can be hope for the future.

Just like on the IRC channel, people will want to know, and if its not a PC, so what if its an Amiga? Commodore is dead, long live Amiga.

David
via email

I think that two or three years ago, people were all too aware of the Amiga's bad points. They seem to have forgotten the bad things that they heard about the Amiga now and they're much more open to believing that someone else has a better computer than they do (a belief engendered by the "upgrade, upgrade!" mentality prevalent on the PC, and by the poor quality of most PC software), so it seems as though Amiga have timed their stab at the market just right.



***strICQ* in action – even able to shame Pentium owners.**

SATISFIED READER

First, like 'Oovis' (*AF124*, June '99), I enjoyed your article about online shopping. In fact, it finally persuaded me to get a modem and go onto the net, and I'm only sorry I didn't do it sooner. I used Blackstar, getting a difficult to find video at a real bargain price. Anyway, to the point.

I subscribe, enjoying a reasonable discount on the cover price, I've made use of the Tuesday reader telephone help service you offer, I value advice on both hardware and software offered by contributors and readers alike, and enjoy the CD, especially on the odd occasion we get a full program (hint, hint!). The tutorials are good too – I'm currently trying out the HTML one. To me, all this suggests that the mag is good value for money, that the staff actually give a damn and that the users are an intelligent, friendly bunch… if only they'd stop moaning! Keep up the good work. Do I get the tenner now?

Steve McKeever
via email



Shopping on the net – the hi tech way of getting into debt…

Snippets:

It's nice to see that you're finally being a bit more daring with your covers. Keep up the good work!

Ian Court
via email

I'm glad you like the covers we've done of late. We're particularly fond of last issue's cover with the jigsaw.

Just a short one to tell everyone how brilliant free4all (http://www.free4all.co.uk) is. They actively support the Amiga – not just a few odds and ends, but pages of details on how to set up. They have 0845 tech support, loads of them own Amigas and they're the friendliest tech support you're likely to encounter. Also, there are no hang ups straight after connection, as with Freeserve, and they're fast, unlike Bigwig.

Matthew O'Neill
via email

What tenner? We probably won't get any more full software on our CD now. Not only do I feel that it contributes to the decline in the software market, we just don't have the budget for it at the moment. I'm very pleased that you've decided to join the many thousands of Amiga users online though. Have we mentioned afb before at all?

ICH KANN NICHT DEUTSCHE SPRÄCHEN!

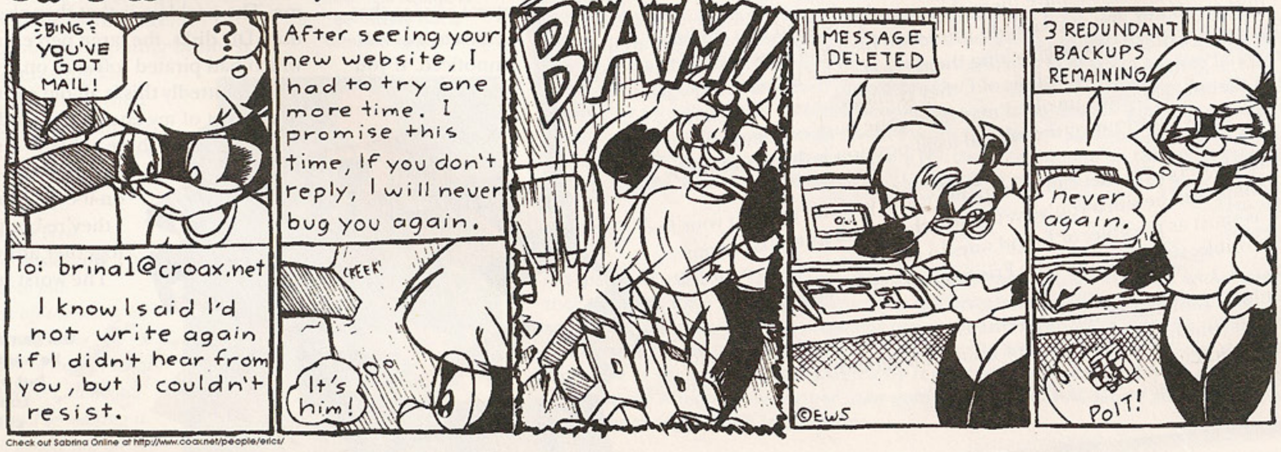
Dunno about you, but after reading the sad news about *Settlers 2*, I visited the website the mag printed in the June issue, only to find BlueByte respond with an automated message in German.

After trying to translate it, I got the idea that they were going to take a while to see what they think they should do, in sight of all the emails. Can you possibly print a translation?

Hugo Wilkinson
via email

Continued overleaf ➡

Sabrina Online by Eric W. Schwartz ©1998 "Autobots and E-mail don't mix"



Check out Sabrina Online at http://www.coax.net/people/erics/

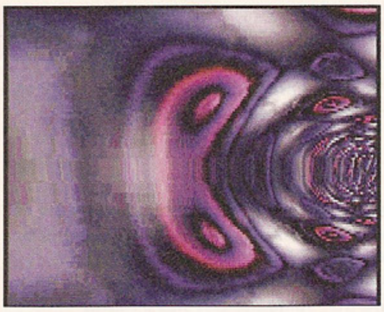
It roughly says that they're receiving loads of emails and will deal with yours as soon as they can get round to it, in the next few days.

MMM... SWIRLY EFFECTS...

In reply to the letter titled 'The Price is Right?' (*AF124*), I'd like to say that I'd totally object to a price rise. I think £6 as it is each month is an awful lot – any higher and I'd seriously consider not buying *AF*. I know it needs to survive and prices have to rise to cope with this, but there comes a point where I will draw the line.

My second complaint is about the PD review of Nuance's *Vendetta* by Richard Drummond. Again we see yet another review of a demo by someone who doesn't know what he's talking about – "swirly plasma effects", "thumping tunes"... Please, please get someone who knows what they're talking about.

Then to add further insult he ends his review by saying that you'll only appreciate it if you're part of the 'scene'. I've seen many demos in many years and have loved most of them, I see the months of work that have gone into them and then see it all kept away by reviews like this. I'd really like to



Swirly effects in all their glory. Thumping tune just out of earshot.

know where Richard has been for the last 10 years. 'Hey, Amiga Rulez, man!' Honestly...

Chris Seward
via email

Ahh, demos. Jesus On Es, NineFingers, Spaceballs... wonderful, wonderful things, apart from, well, I guess they're pretty ephemeral. What's to know when it comes to talking about demos? In fact, I reckon you could probably have a demo review generator that spliced together words like "swirly", "plasma" and "thumping" to create a new review each time. In fact, Richard is known to be a bit of a coder – was that what you did Rich? His now-completely-automated Amiga has just told me no.

BLATANT SHOP PLUG

Many Amigans may find that they sometimes can't afford brand new equipment, and there's one man who gets too little recognition for what he does. I've found an excellent service, 100% of the time, from the Second Hand Amiga Centre. Andy, who runs the place, is an extraordinary person who devotes a lot of time to the business and has been able to help me on more than five occasions. I have nothing against brand new equipment because a lot of my setup is new, but I've found that the SHAC is an excellent place to find high-quality equipment at amazingly low prices. I really think more Amigans should be aware of this great service that seems to go unnoticed. If you need any persuading, here's the proof: I recently got an Apollo 1240 40MHz card for my A1200 with 32Mb of RAM for only £103.50! That's after the trade in of my Viper 1230/50 with 16Mb.

So, if you want to upgrade your Amiga for very reasonable prices, I really suggest you try the SHAC. The service is great, the equipment is great and you can be certain that there will be something at this treasure chest that will suit your needs.

Finally, even though great things are promised about the new Amiga, I just hope Amiga are as committed to a mass worldwide advertising campaign.

Nick Lamburn
Braunton

TICK WRONG?

Before we all get carried away with this debate about whether Gateway should drop the Amiga Boing ball in favour of the old Commodore tick logo, can we just bear in mind one small thing: unless I'm very much mistaken, the Commodore tick logo was a Commodore trademark and as such will belong to the owners of Commodore, not the owners of the Amiga.

Gateway only bought the Amiga name and patents, not Commodore's. They belong to somebody else – Commodore 64 Web-It, anyone?

Lion
via email



This much is true. However, it doesn't stop people reminiscing about it.

PIRATES AHOY

I've been meaning to write about this dilemma for a while and have finally been inspired by your article on the same subject – piracy. As a student I used to go to a shop which was very useful at getting second hand games for me. The problem is that they also sold used DD disks, the large percentage of which had pirated software on.

Admittedly this is all old software, to the best of my knowledge, and they sold these as blank disks with a we-don't-know-what's-on-it-even-though-they're-bundled-together attitude. The worst piracy



Old games may be hard to find, but pirated copies are still illegal.

A POINTED LETTER

I just want to make a few points.

1 In the May issue (*AF123*) in the piracy feature, a guy called Simon Dinninigan said, "So far I haven't seen a single piece of Amiga Warez on the net." This statement is rubbish – I found *Max Rally* on the net in 2 .dms format, as well as other commercial games.

2 I've downloaded some ADF files because I want some old games, but some of them contain some viruses, so to anyone using ADF files, please check them. Also, is this legal or am I doing something illegal?

3 To all those people who say, "Get on the net on your Amiga," I agree, but at least tell them how much it costs – I got a phone bill at £96.89 for one month on BT, although I was hammering the net.

4 I agree with the shutdown function on the Amiga as it would come in handy. I love the Amiga ball but I'd love to see Amiga ball and classic tick together to show PC users the Amiga then, Amiga now and Amiga forever.

5 Keep up the good work on *Amiga Format* and I wish you all the best for the coming millennium.

Adam James
via email

1 Quite often the sites which have these things are quite fluid so a casual searcher won't find any warez, but you're right, there are plenty of sites that do have them.

2 Is what legal? Using ADFs or checking them for viruses? If these ADFs are commercial games, no matter how old, they're illegal. Even though there's a grey area in that the company involved may have gone bust, or they have no interest in the Amiga market any longer, the official legal position is that it definitely isn't (legal, that is).

3 You certainly were. The net can be expensive and you can bet that your first month online will be since you've yet to search out things to make your time online as short as possible, or found ways to make your calls to your ISP as cheap as possible, such as using BT's Friends and Family and Premier line services.

4 The shutdown function would be useful as a reminder to save work before switching off your machine, but in my opinion it shouldn't be compulsory, as it is on the Mac and PC.

5 Okay, we will. Thanks!

ADDRESS REQUEST

First a word of thanks to Dave Cusick for answering my email. It's nice to know that busy people like you can still take the time to give a few words of encouragement to a new starter online. Thanks Dave.

My main reason for writing to Mailbag is to ask if it would be possible to print a list of all the email addresses that have featured that month. That way, instead of having to go through the whole mag in search of that mail order company or that fantastic new games distributor, all we would have to do would be to turn to the list and look under the heading that's of interest to us.

Paul Crellin
via email

I'm not sure that the advertisers would be too pleased about that. However, find them once, add them to your hotlist and they'll be easy enough to find again.



that I witnessed was a number of CDs with DMS archived software on. I never purchased any dodgy disks for fear of viruses, though I was certainly tempted in my quest for retro games. The question is, do you shop or not? Is piracy of old software as bad as piracy of new stuff?

Ade
via email

This "old software can't be bought any more so it's exempt from piracy" argument is a tricky one, but it's specious. Unless the originators of the title have specifically said that their software is now freely available, it's still piracy. Perhaps it would be a good idea if people approached old games companies and asked them to re-release their difficult to find titles as freeware.

BALL/TICK LOGO COMBO

I really like the idea of using both logos for the Amiga, as suggested in *AF124* by Jim Buckley. I think the the Boing ball should bounce, drawing out the tick as it goes. To show you what I mean I've had a go myself (shown above).

Secondly, is it true that Amiga are producing something called AmigaSoft? it sounds like the result of some sort of bizarre genetic experiment using Amiga and Microsoft – please say that it's not true!

Calum
via email

The AmigaSoft name is one that most people I've spoken to dislike, mainly on the grounds that it does sound a bit like MicroSoft, but yes, it is their chosen name for the new machine's Operating Environment (which is another new coinage being used to replace Operating System).

IT'S GOOD TO TALK

Just a short note to let you know that the best thing on *AFCD40* was the (St. Louis?) Jim Collas show speech. Please put as many of these on the CDs as possible.

Paul
via email

Obviously we can only put on there what we have, but I know that these snippets from shows are interesting for those who can't attend, so you'll certainly be able to look forward to World of Amiga coverage, Cologne show coverage and many more.

NEED FOR SPEED?

Is there any chance of *Amiga Format* doing a feature about how to overclock an accelerator?

James Grist
via email

Not a bad idea. Look out for it in an upcoming issue.

AMIGA FORMAT ONLINE

Do you still have a website? If so, could you send me the address? I could only find *Amiga Format*'s email address in the magazine. Also, is there any chance of a tutorial for installing *Linux?*

Finally, if you have any space left on your cover CD, what about *X11R6*? I realise it's not really Amiga stuff but at least it's not owned by Bill Gates! Keep up the good work.

Andrew Walker
via email

Our one and only website address is pretty easy to find, and it's located at: http://www.amigaformat.co.uk. *A tutorial for* Linux *isn't currently on the cards but from this issue onwards there will be a FAQ section on the CD devoted to it. If anyone wants to add questions (and answers) to it, we'd welcome them.*

AMIGA 'NOT COMPUTING'

I thought you might be interested in the following. *The Guardian* newspaper's Online supplement for June 3rd has an interview with Ted Waitt, CEO of Gateway. The following extract is of interest to the Amiga Community.

Guardian: "A couple of years ago you bought the Amiga technologies. Will you be using these?"

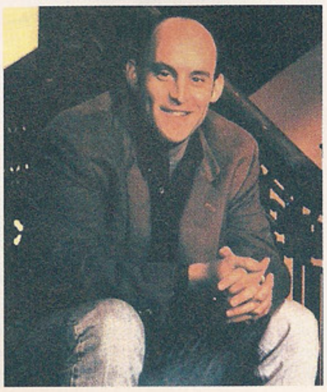
Ted Waitt: "We've had a group of people working on leveraging the Amiga assets into an appliance strategy for us. How well it works out, I don't know: it will be interesting to see. There are some great assets there. It's definitely not a computing business."

So, interesting last sentence. I wonder what the Amiga view of this is?

Scott
via email

Ted may have been deliberately misleading The Guardian *to put competitors off the scent, he may not have a true appreciation of exactly what the new Amiga's all about, or he may just be making it up. Which would you prefer?*

Ted Waitt, Gateway CEO: The Amiga is "definitely not a computing business".



A BIG HAND FOR EYETECH

I would just like to say a few words about my experience when buying a PowerPC card for my A1200T and the woes I had getting in it to work.

Imagine my joy as my PowerPC arrived, along with the BVision. I opened the parcel, read all the documents that came with it three times, undid my tower, took out my old Blizzard '030/50 SCSI, pushed in the PowerPC and put the tower back together. I switched on and nothing happened – the power light came on and that was that. I undid the tower, checked and rechecked all the connections and turned it on, but still nothing. After spending hours shouting and swearing, I contacted Eyetech, who supplied me with the PowerPC, and explained my problem to their technical support who suggested it might be a power problem.

I then tried what he suggested and it worked, so I reconnected all my tower and bits and it didn't work, so back on the phone to Eyetech...

To cut a long story short, in the end it was my Power Tower keyboard interface that was causing me all the problems, and after getting back on the phone to Eyetech support and getting a new keyboard interface, it all now works. I sent Eyetech an email thanking them for all their advice and patience on the phone with me, as I was on the phone every hour to them, and also sent them a letter in the post, and today I got a personal reply from their manager thanking me for the letter I sent. I've sent this letter so other people can see not to despair and get annoyed when something in there Amiga doesn't work first time – just give Eyetech a call.

I can't stress how good this company is – there's someone on the other end of the phone line who wants to listen and help if they can, not just take your money.

Jason Cox
via email

I'm glad you managed to get your PowerPC problems sorted out in the end. It seems that the remaining Amiga companies are the ones who do offer advice and are courteous and helpful when problems occur with their products, and I'm sure a similar tale can be had from customers all over the Amiga market of all the dealers there are. It shows the exact reason why it pays to buy peripherals from an experienced Amiga dealer rather than going to your local PC World and just hoping that everything's going to work fine.

The Gallery

ON THIS MONTH'S CD

AFCD42:-ReaderStuff-/-Gallery-

Ben Vost judges the latest batch of hand-drawn and rendered pictures from the Amiga world.

Sponsored by Amiga £100 WINNER!

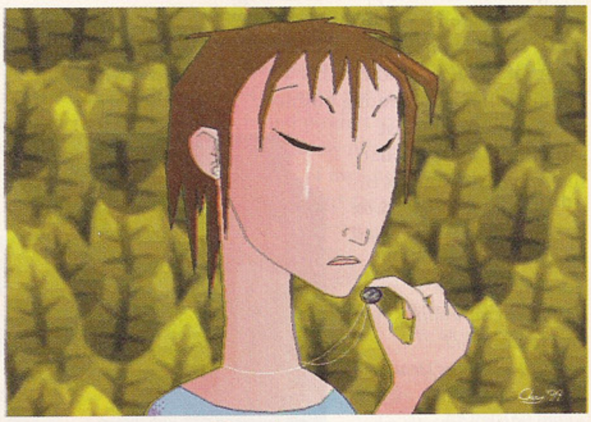




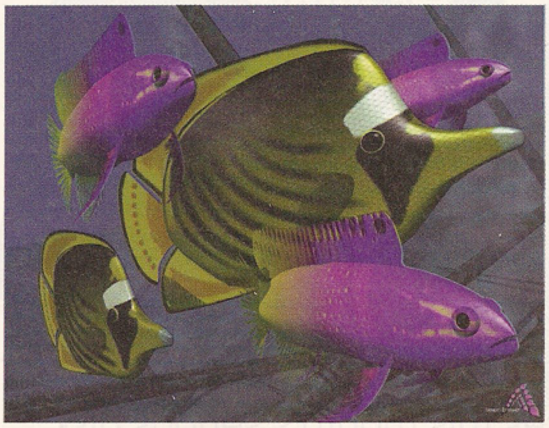
CityScape and The Tempest by Ogy (above, right)
Ogy has taken photographs and merged them together brilliantly in *ImageFX*. While still a little 'processed', his newly uprated system obviously gives him the power to do stuff he wouldn't otherwise have thought of. Excellent work.



Fighters by John Tsanais (left)
John's pictures all look vaguely familiar to me, as though he's seen a picture in The Gallery and then improved upon it. This image reminds me of Tobias Richter's later work on the Amiga, and is certainly none the poorer for it.



Sad by Chris Spicer (above)
Chris has a lovely painterly feel to his pictures, which take a long time to produce considering each image's simplicity. Here he shows his inspiration from 16th Century Chinese artwork.

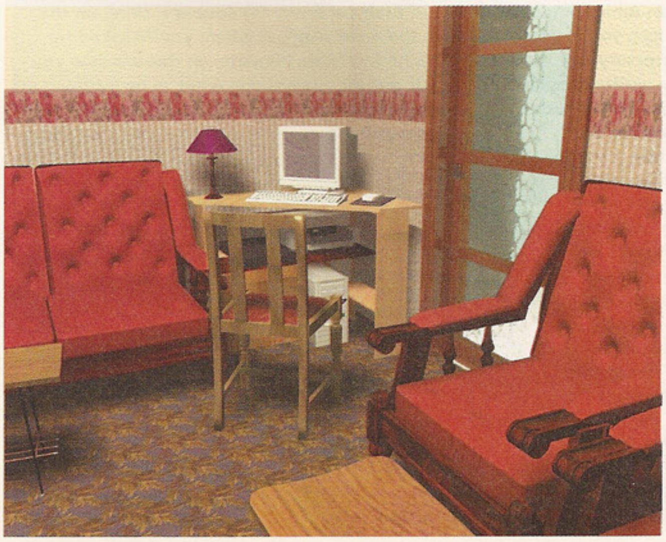




Chase Over Water, Fish Group and USS Pathfinder 1 by Simon Brewer

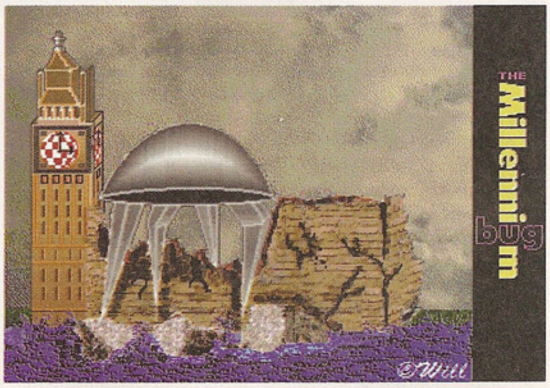
Simon has sent in some lovely work for our CD in the past, and this new stuff is even better. Simon has really got to grips with *Lightwave* in the way it should be used.





Our Room 10 by Neil Corbett

Neil's building up a representation of his own living room in *Cinema 4D*, and although he says he hasn't quite finished it yet, it's already looking pretty good to us.



Millennium Bug by William Lamburn

William reckons this is his first bit of art done on an Amiga; in fact two Amigas as he managed to finish the picture off on his brother's A1200. It's a nice piece of work and pretty timely too.

CONTRIBUTIONS

If you'd like to enter your work (and it should be only your work!) for the Gallery section on the CD and the pages in *Amiga Format*, read the Reader Submissions advice on the CD (you can find it in various places) or simply make use of the form from the CD pages of this magazine (page 86).

Serious disk





AMIGA FORMAT

Errol Madoo introduces this month's serious disk, which brings together a great collection of utilities guaranteed to offer something for everyone.

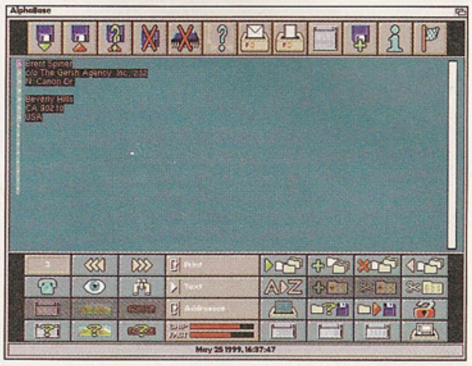
Alpha Base

Alphabase is a database program with the emphasis placed squarely on ease of use, and because of this it should appeal to lots of *Amiga Format*'s readers. One of its strengths lies in its help system which constantly displays help text at the bottom of the screen as the mouse is moved over buttons. This feature alone should gain favour among users who are new to the program as it negates the need to learn what all the different buttons do.

> "One of its strengths lies in its help system which constantly displays help text at the bottom of the screen..."

Alphabase may prove a little restricting to some users but should meet the requirements of a large majority of Amigans as it supports the two main types of database design. You can create "formless" databases which contain only text information: for example, a database for your audio CD collection that features the artist name, the album name and perhaps the song tracks. *Alphabase* also allows the creation of "dataform" databases that can include a mixture of pictures and sound, along with your text, so you could expand your text-only audio CD database to include a picture of the artist, sleeve artwork, etc.

Alphabase requires Workbench 3+ to run, as well as some standard libraries. This is the shareware version and it's limited to 20 records. The program's author only asks for £10 for the keyfile that removes the restrictions though, and in my opinion it's well worth it.



If you want to meet Data, just turn up at the Gersh Agency and tell them that *Alphabase* sent you.

FULLPALETTE

The *FullPalette* system is designed to replace the standard Workbench palette preference program and allows you to edit/save all of the 256 Workbench colours, rather than just eight of them as the standard Palette editor does. It features a preference editor called *FullPalette* that allows you to define the colours, and a patch called *FPPrefs* which runs in the background and takes care of applying the palette settings every time the Workbench screen is opened.

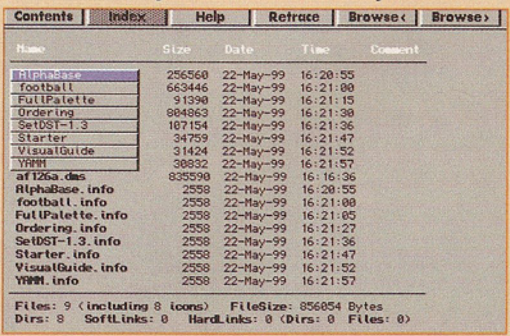
You can decide exactly which colours are to be "locked", and thus never modified by programs running on the Workbench screen, and also which colours are to be left "free" for *IPrefs* and other applications. This, among other advantages, makes the managing of icon palettes much easier. For example, by using *FullPalette* you can use icons with any number of colours without them changing when viewing a picture with *MultiView* on the Workbench screen. You could also set colours 4-7 to always be the same as colours 252-255.

***FullPalette* also features a button strip which allows you to easily perform editing actions such as Copy, Swap or Spread. For the purpose of editing the Workbench palette, *FullPalette* can completely replace the standard Palette preferences editor, whose settings file (palette.prefs) can be saved out to maintain Workbench compatibility, although *FullPalette* can also use a custom file preference file. *FullPalette* requires Workbench 3+, and if you normally use *IPrefs* you'll be happy to know that *FullPalette* runs alongside *IPrefs* without any conflicts.**

VISUALGUIDE

***VisualGuide* is a great tool that quite simply scans selected devices or directories and creates an AmigaGuide file listing of their contents. On double clicking on the *VisualGuide* icon you're presented with the main window where you're asked for the source directory and the destination AmigaGuide filename. In this window you also have the ability to select the various output options you want to be included in your AmigaGuide file, such as file version, if you want icons listed, if you want file dates listed and so on.**

***VisualGuide* requires Workbench 3+ to run, has a *MUI* interface, supports both hard and soft links and can be launched from either Workbench or CLI. *VisualGuide* is pretty fast too: I created an AmigaGuide file of this month's -Coverdisks- directory on the *AFCD*, which contains 66 directories and 356 files, in about three seconds!**



***VisualGuide* is great for creating detailed AmigaGuide files of your directory contents.**

STARTER

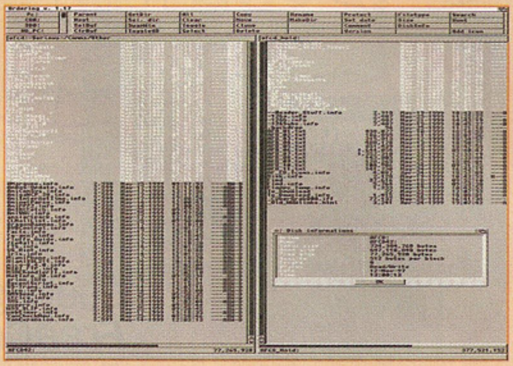
Starter **is a simple little tool that allows you to launch programs by simply choosing them from a standard file requester. It can be run from either Workbench or the command line. In Workbench mode,** ***Starter*** **will look for the program's icon, and if it's present it will run the selected program with any ToolTypes present.**

If you run Starter from the CLI you can specify which directory you want to start the program in, along with an "ASK" option which allows you to specify any arguments for the program you wish to run. One use for ***Starter*** **would be to include it in a** ***ToolsDaemon*** **or** ***ToolManager*** **menu as a CLI program which would then allow you to launch CLI programs without having to open a CLI window beforehand.**

ORDERING

Ordering**, in its simplest terms, is a directory utility, and any readers who are familiar with the excellent** ***Directory Opus version 4*** **will immediately feel at home with Julien Torrès' program. Although** ***Ordering*** **is by no means designed to be a replacement to** ***Directory Opus*****, its main advantage over** ***Opus*** **is that it's extremely compact indeed.**

Where ***Opus*** **has a very complex install and set-up procedure,** ***Ordering*** **can be "transported" to another Amiga by simply copying a few files to a floppy, so if your** ***Opus*****-less mate has just phoned you in a panic because his system has thrown a wobbly and he wants a hand to put it right, all you need to do is plonk** ***Ordering*** **onto a floppy and take it with you on your rescue mission.**



Ordering may not be an *Opus* beater but it's very compact and does the job very well.

Ordering **has most of the features that users are likely to need, including move, copy, delete, search, makedir, rename, hunt, etc. It also has full support for playing sounds, the viewing of pictures, icons and fonts and even unarchiving archives.** ***Ordering*** **should work on any Amiga with at least Workbench 2.04 and will use the diskfont.library, icon.library, locale.library, amigaguide.library, whatis.library, reqtools.library and powerpacker.library if they're present on your system.**

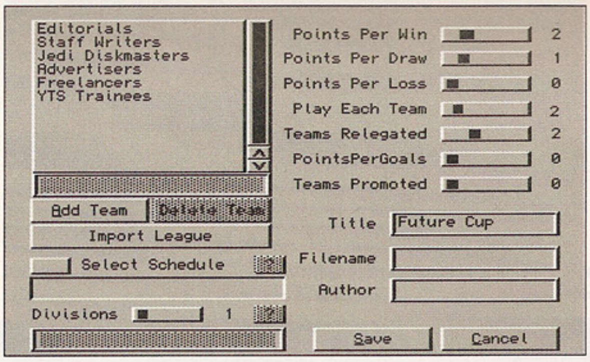
Football

Primarily, *Football* is a large collection of ARexx scripts which is designed to display information, such as the game statistics, league tables and results of, believe it or not, football matches.

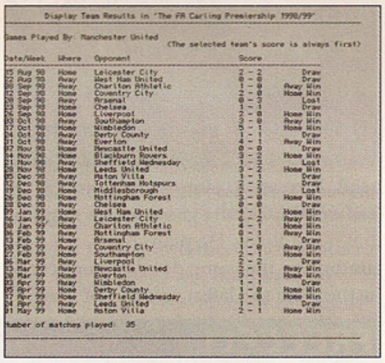
The main *Football* interface acts as a central hub for the 14 ARexx scripts where you, the football fan, can create your own leagues and cups using a multitude of different options. Matches can be scheduled and, after inserting the score results, the data created can be manipulated by the programs supplied to produce different displays, or you can even write your own scripts.

Everything in *Football* is controlled via its main window which contains buttons for all its main functions. These include the the ability to display league information, entering game scores and displaying individual team results and statistics. Here you can also enter your own league information and on selecting this option you're presented with a new window where you enter the new league name, the individual team names and, of course, you can fine tune the points awarded for wins, draws and losses (yes, you can be generous if your team is at the bottom of the league!).

Football requires Workbench 2+ to run and obviously also needs ARexx to be up and running. An installation script has been provided but installation really only requires copying the *Football* directory to wherever you want it to be, setting a few ToolTypes and program paths in the icon's information window and then double clicking on it. The author has been kind enough to supply example datafiles which include the English Premiership for the '97/'98 season, the current season, '98/'99, up to May 5th '99. The World Cup in France has been created with the league option for the first stage and the cup option for the remaining phase.



I have a sneaking suspicion that the Jedi Diskmasters will win the Future Cup before a game is played!



Manchester United's game record and stats for this season are just a click away.



The ***Football*** main interface window is where you can control everything from.

SETDST 1.3

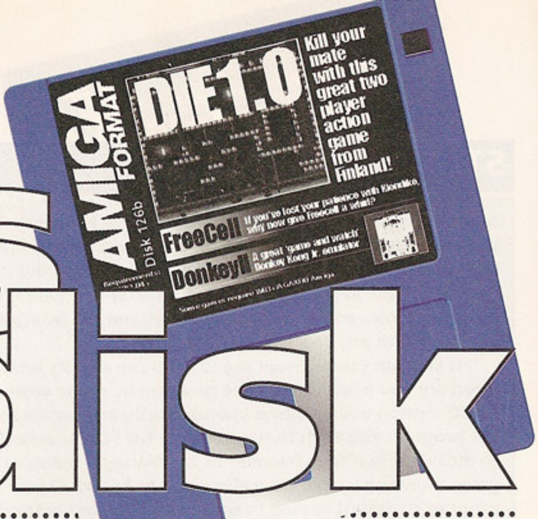
In most countries of the world, local time changes two times a year, from local standard time, also known as Wintertime, to local daylight saving time (DST), also known as Summertime. ***SetDST*** **helps you to keep up with the DST switches and will perform any necessary action automatically. It may be run in the background if you wish, so if you never switch your computer off it will make sure that you always have the right system time. In addition to that,** ***SetDST*** **creates and manages up to four environment variables which enable other applications to make use of the time zone names and GMT offsets stored within. It's also able to patch the default locale by user request.**

YAMM

This is a small program that displays the amount of chip and fast memory available to the system, as well as being able to display memory totals and largest memory blocks. It's also capable of giving warnings when any of the memory levels fall below the pre-definable settings. These warnings can either be a change in the normal text display colour or a flashing of the screen if the window isn't able to open on the frontmost screen.

YAMM **can also be set to follow you to the frontmost public screen, so as you flip between different screens,** ***YAMM*** **will follow you and pop up there as well. It will remember the X and Y screen positions on up to 20 different screens in any one session so it should always pop up in the same position on each screen. If you prefer,** ***YAMM*** **can be set as "hidden" and will only pop up if a warning needs to be given.** ***YAMM*** **is fully controllable with user-defined hotkey combinations which are set up with its icon's ToolTypes or with a commodity exchange program.**

Games disk





AMIGA FORMAT

Errol Madoo introduces ***DIE***, a great two player duelling game from Finland, the hugely popular ***FreeCell*** and a fantastic conversion of ***Nintendo's Donkey Kong Jr***.

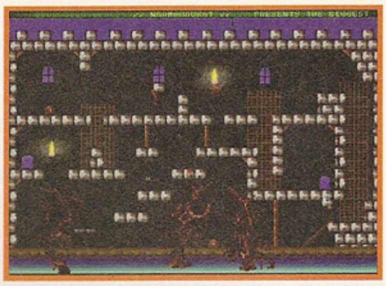
DIE

DIE's author, Riku Rakkola from Finland, was inspired to write *DIE* after playing the Amiga games *Roketz* and *Turboraketti*. With the basic game idea swimming around his head, Riku spent almost a year and a half developing the game to the stage that it's in today. He plans on continuing the game development even further and the latest versions of it are always available on his web pages at: http://www.sci.fi/~naama. Anyway, enough of the background, let's get on with playing the game…

Although the basic idea of *DIE* is the same as *Roketz* and *Turboraketti*, the big



Erik (left) and Danny (centre) spent many long hours killing each other in *DIE*, while Reno (right) was overseeing the action.



The background details can be turned off for those with less powerful machines.

FREECELL

For those who are unfamiliar with *FreeCell*, it's a card game similar to the age old *Solitaire*. If you have played *Solitaire*, and let's face it, who hasn't, you'll know that more luck than skill is required in order to win the game. If you're not lucky enough to get the cards dealt in exactly the right order, your chance of winning is severely reduced. *FreeCell*, on the other hand, is slightly different and requires more skill than luck to win.

The game starts with all 52 cards arranged randomly in eight piles. The object is to rearrange the cards into four piles, one for each suit, arranged in ascending order. These four piles are in the top right hand corner of the screen. In the top left hand corner are four 'free cells' in which you can place one card temporarily while sorting cards into their final position. You can also move cards between the eight piles. However, you can only place a card on a pile if the top card of that pile is the next card in ascending order and of the opposite colour; exactly the same rules as *Solitaire*.

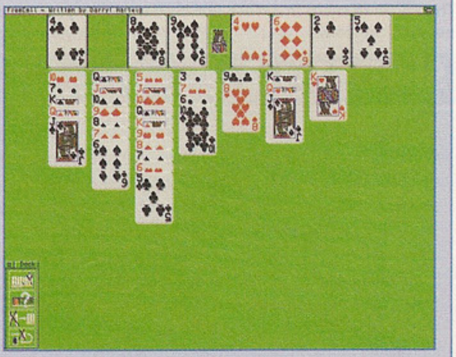
Unlike *Solitaire*, you can only move one card at a time, but to save time the program will also allow you to move a pile of cards providing it would be possible to do so using one card moves. For example, with four free cells you can put four cards from one pile into the free cells, then move a fifth card from the same pile to a new pile, before finally putting the four cards from the free cells back on top of the fifth card. With four free cells the program will therefore allow you to move five cards to another pile at once.

To move a card simply click on it once, move the mouse to a new location and click again. To move a pile of cards, click on the card that will be at the bottom of the pile you're moving, move the mouse to a new location and click again. If you try to move a card or a pile of cards to a location which doesn't obey the rules, the card/cards will snap back to their original location. If you try to pick up a pile of cards which don't follow the rules, the card you clicked on will be displayed but not picked up.

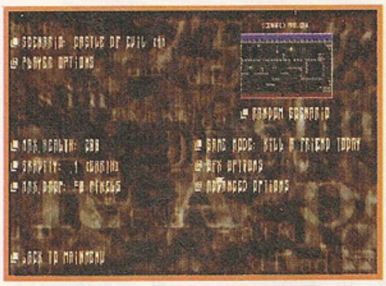
The program will automatically move cards to their sorted positions when it's possible to do so, and when they're no longer any use to you for sorting other cards. You can move cards to the sorted positions yourself when they're at the top of a pile or in the free cells, but this would normally be done in sheer desperation.

***Freecell*'s comprehensive options menu allows you to customise the on-screen colour palette, displaying game statistics, the ability to turn invalid move error messages on or off and setting the number of free cells, so if you're finding the game too easy when using four free cells you can disable them and try playing with none. *FreeCell* also has a small floating tool dock which contains four handy buttons which can be used for starting a new game, selecting a game, restarting a game and undoing your last move.**

All in all, *FreeCell* has proven to be very popular with Amiga users, and with good reason. It's well put together and is easy enough to learn and play while still being challenging enough to offer long lasting appeal to the experienced games player. If you like playing *Solitaire*, *FreeCell* really deserves a place on your hard drive.



Although *FreeCell* may look a bit complicated, it's really easy to get to grips with.



DIE has a wide range of options to let you customise each game.

difference is that the ships in those games are replaced by little running men. The heart of *DIE*'s gameplay is that the guns' bullets are pixel based, which uses a special pixel routine that supports homing bullets, bullets that are affected by gravity and also the ability for the game to display up to 200 pixels on-screen at the same time. Riku has added special items, interactive objects and the ability to create your own levels.

DIE features two-layer, 128- colour graphics and copper-colourslides, along with special graphic effects such as parallax clouds and water. Levels are littered with interactive objects such as teleports, doors and ladders, as well as over 20 deadly weapons, shields, health packs, gravity belts and speed modules.

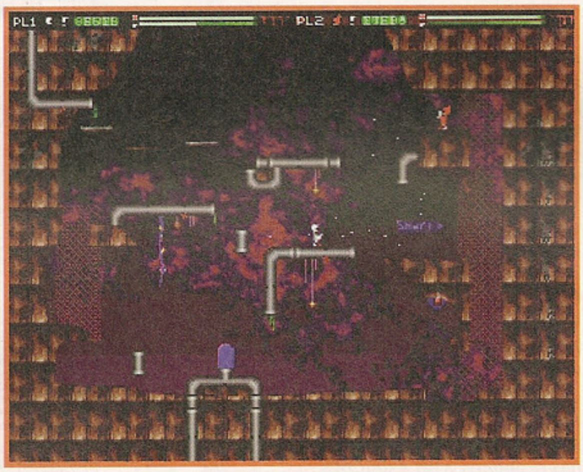
PLAY DEAD

Okay, now to the gameplay. *DIE* is a two player platform action game where the main aim is to kill your opponent while running around the screen, jumping on and off platforms and collecting various special items. Your opponent can die in one of two ways: you can simply shoot them to death or, if they're silly enough, they can cause their own demise by losing their own energy through falling off the platforms.

While all this mayhem is going on, you can collect medikits to replenish your health levels and gravity belts to allow you to jump higher.

> "Levels are littered with objects such as teleports, doors and ladders, as well as over 20 deadly weapons..."

As mentioned before there are 20 different deadly weapons that can be collected on your death quest and these include the cool sounding Just Call Me Mr. Lucky, Big Brutus, Twister,



Be careful not to fall from a great height or you're likely to die...

Supernova, Fatboy, Magic Wall, Magic Trailer, Run like an Animal and Easy Meat, each of which exhibit different qualities, power and accuracy. Be warned, though – *DIE* only allows you to have one weapon at the time so if you like the one you have, don't pick up another one!

CONTROL

Game control is via keyboard and joystick. *DIE* also features a full options menu where you can customise the graphics options and such things as which of the five scenarios you want to play, the gravity settings, sniper mode and maximum health settings.

DIE also has two game modes. You can either play "Kill a friend today", where the object is, strangely enough, to

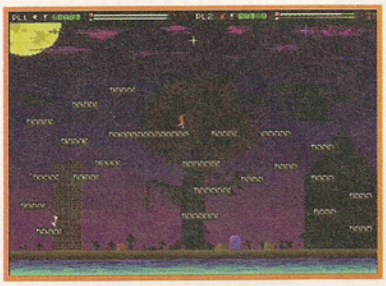


The two game characters are called Jesus and Satan, so there's plenty of Biblical bloodshed.

kill your friend, and then there's "Rob a flag" mode where you both need to chase the flag which appears randomly in different parts of the screen. In this mode your opponent steadily looses health while you're in possession of the flag; the longer you can keep the flag, the weaker he gets until he finally shrivels up and dies.

DIE requires an AGA Amiga and about 1MB of free chip memory, but fast memory is strongly recommended. On a basic A1200 it may run a little slowly (25fps), and if this the case on your machine you could try turning off the 2D layer, the special effects and possibly the background animations.

For the adventurous out there, Riku emailed me to say that there are a couple of hidden (and undocumented) features in the game, so try to change the name of player one to "cop" or "chicken" (without the quotes) for some added variety.

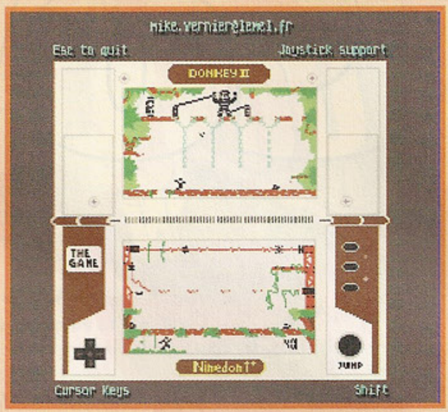


The blue door is a transporter, which can be very useful for getting out of tight spots.

DONKEY II

Here's a blast from the past for all you Nintendo game players out there. *DonkeyII* is a pretty faithful conversion of the classic game of *Donkey Kong Jr.* If this doesn't sound familiar or if you've never played the game before, it's played on two separate screens. The basic story is that your dad, the gorilla, has been captured by a guy called Mario who has chained him up with four chains on the top screen. Your aim is to free him by collecting four two-part keys located in both the bottom and top screens, while at the same time avoiding crocodiles, electric shocks and birds that are intent on killing you.

Once you've collected the two parts of a particular key, you need to climb up the vines into the top screen and clamber up one of the four chains to unlock it. After this is done, you only have three chains left to go before the process starts over again, until you've finally unlocked all four chains and released your mate. When he's free, he jumps with joy a couple of times and flashes (no, he's not a pervert!) while you clamber down the chain, run across the screen with your arms open to catch him. *DonkeyII* is controlled with either keyboard or joystick and should work on any Amiga with at least 1MB of RAM, although it should be pointed out that *DonkeyII* will crash an Amiga equipped with an '040 processor.



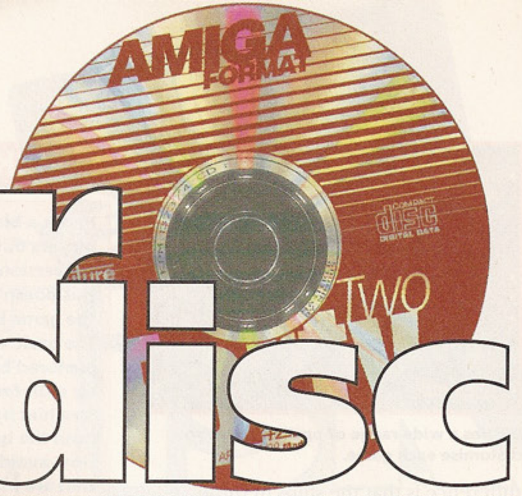
Classic Nintendo gaming with this great version of *Donkey Kong Jr.*

DISK NOT WORKING?

We take every care to test the coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:
AMIGA FORMAT (insert name of disk) • TIB PLC • UNIT 5 • TRIANGLE BUSINESS PARK • PENTREBACH •MERTHYR TYDFIL • CF48 4YB
If there is a manufacturing error then the stamps will be returned with a replacement disk.

Coverdisc

AMIGA FORMAT





Forty-two may be the answer to the great question of life, the universe and everything, but it's also the number of the latest *AFCD*. **Richard Drummond** investigates...

DIGITAL ALMANAC II

-Serious-/Misc/DigitalAlmanac

Mankind has always had a deep fascination for the night sky. The courses of heavenly bodies have been used as the basis of everything from calendars to religious systems to cartography. In today's 'civilised' world, however, the vast majority of us have lost our affinity for astronomical events. Safely walled up in our cities, our sights blurred by light pollution and smog, we are blissfully unaware of the drama taking place above our heads.

Ironically, when programmed appropriately, the computer – one of the very fruits of our endless drive for mastery over nature – can help us to resynchronise ourselves with the natural rhythms of the universe. *Digital Almanac* is just such a program.

In simple terms, *Digital Almanac* is a vast database of the positions, movements and other properties of heavenly objects: the planets, the stars, asteroids, comets and other deep space objects. Its main screen is a plot of the sky as seen from a particular viewpoint and time. This viewpoint may be changed to any location on the earth's surface at any time or date. If you want to know what the heavens looked like above Bethlehem on Christmas Day two thousand years ago, this is the program for you.

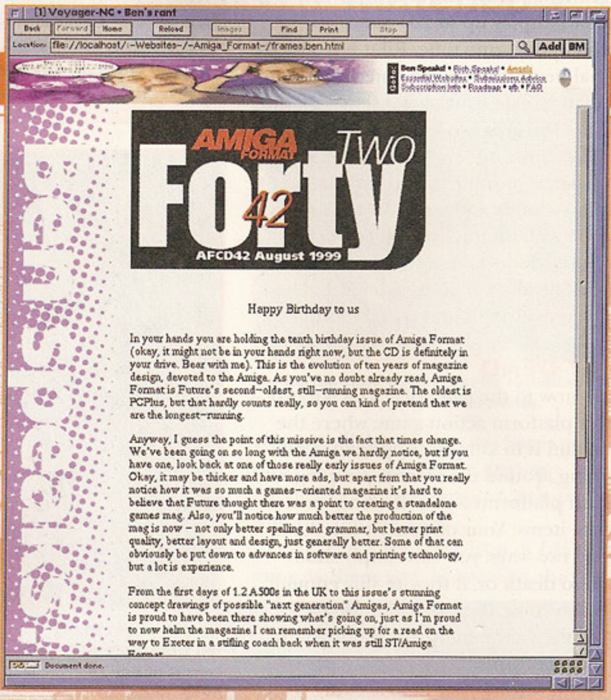
You may zoom in on, search and track astronomical bodies in *Digital Almanac*'s database. Double-clicking on a displayed item will pop up a window containing more detailed information on that item. A useful way of using *Digital Almanac* is to set the geographical location and height above sea level of the point of observation to match that of where you live. The program will then calculate the map based on the current time. The displayed chart should then match your own view of the night sky.

Digital Almanac is shareware and this demo version has a number of restrictions and omissions. For example, the full version has an extensive picture gallery containing stills of all the planets and most of the moons in the solar system, a more extensive catalogue of

WHAT'S NEW

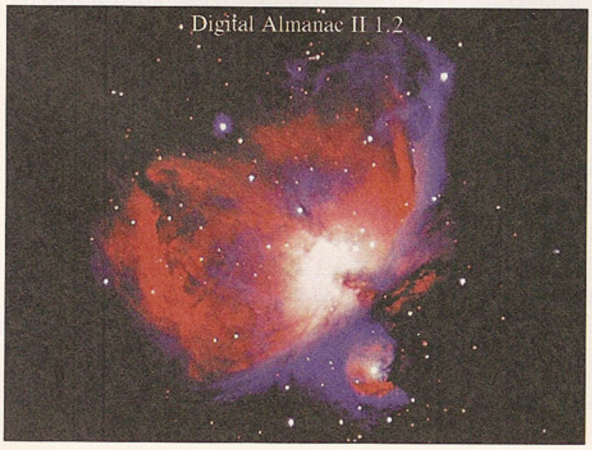
As hard as it may be to believe, we've actually managed to improve this issue's CD even more. The most notable changes are cosmetic. The Seriously Amiga drawer is now named just Serious to tie in with the name change of this section in the magazine, and the HTML has been revamped again. Yes, poor old Ben has been hard at work with his art package and has created new background patterns to replace those nasty, garish ones from *AFCD41*. These should load a lot quicker and will look better on low colour screens. Let us know what you think.

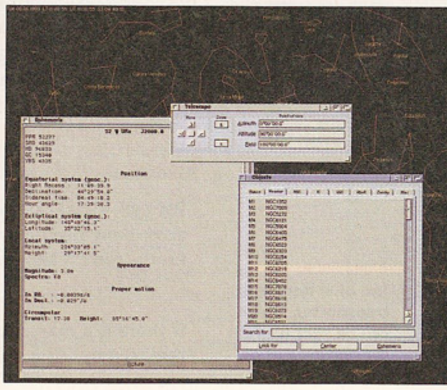
***AFCDView*, *AFCDFind* and *AFCDPrefs* have all been updated too. The new *AFCDView* no longer has problems with *AsimCDFS*, *AFCDFind* now works properly with *DOpus* and *AFCDPrefs* now has online help. Check out +System+/Info/AFCD_Changes.txt for the full story.**



The HTML on this coverdisc loads quicker, is less garish and is just a whole load smarter.

Space, the final frontier... Cross that frontier with *Digital Almanac*.







So which one is Betelgeuse? Let *Digital Almanac* find it for you.

Your Stuff!

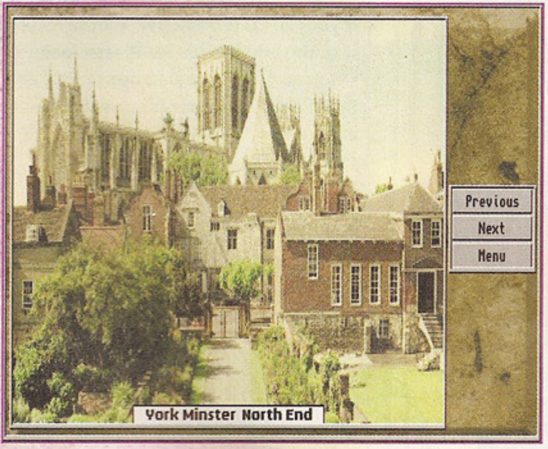
Sponsored by Amiga £100 WINNER!

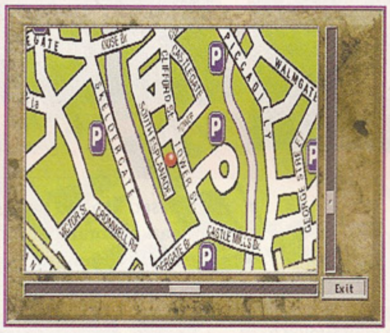


We have another bumper crop of reader submissions for you to have a look at this issue. Because this is our tenth-birthday issue, we've doubled up the prize money for the best contribution to a whopping £100 (cue the fanfare). So, without further ado, this issue's lucky winner is... David Thompson!

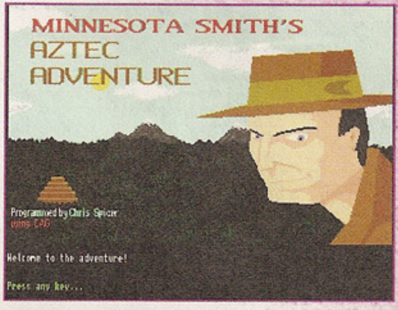
David's entry is a well-produced hypertext guide to the city of York. The guide contains loads of helpful text, giving information on tours of the city, cinemas, theatres, pubs, sports facilities, etc.

Also included is an area map, a street plan and loads of colour photographs of the city's main attractions, all taken with David's Fuji DX5 digital camera. The system-friendly interface to the guide was created using *Blitz Basic*. Well done, David! All we need now is a truly portable Amiga to make best use of this software.





Never get lost in the city of York again with David Thompson's handy guide, this issue's prize winning entry.



Other interesting entries this issue include those from Peter Hutchison and Chris Spicer. Peter sent us a series of fact-packed guides covering topics such as hard drives, graphics cards and *PC-Task*.

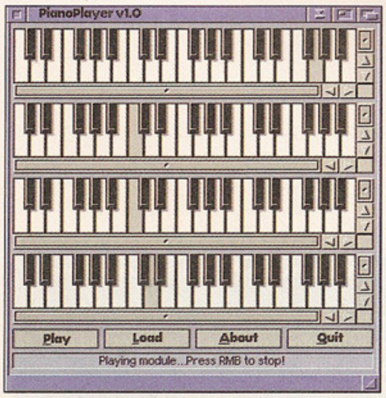
Chris contributed a selection of extra levels for various games such as *Worms* and *Aerial Racers*. He's also given us a rather amusing interactive fiction game called *Minnesota Smith's Aztec Adventure*.

stars and allows you to move the point of view to planets other than Earth. All saving and printing functions are disabled in the demo and registration costs DM30 or $20. Details of how to register can be found in the docs.

EBONY AND IVORY

-Serious-/Programming/MUI/MCC_PKb
-Serious-/Sound/PianoPlayer

Continuing the trend for innovative third-party *MUI* custom classes is *PKb*, a new class which provides the user with a piano keyboard. The target use for this class is in general music applications like the famous *Deluxe Music Construction Set* which inspired it.

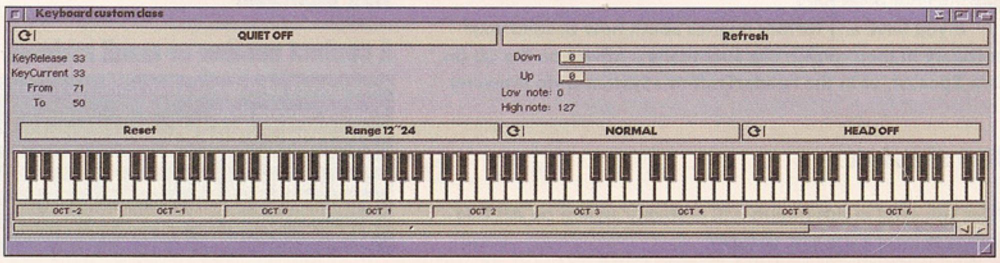


Fool your friends into believing that you can play the piano with *PianoPlayer*.

PianoPlayer is a quick demo to demonstrate the features of this custom class. It simply plays the *ProTracker* module of your choosing and displays keyboards which follow the notes of the music, Pianola-fashion.



Scalos's context-sensitive menus in action.



SCALOS UPDATE

-Serious-/WB/Scalos

Updates to *Scalos*, the Workbench replacement, are like buses – you wait for ages and there are none to be seen; you turn your back for a second and two appear practically at once.

Version 1.2a of this excellent Workbench replacement has no new features but it corrects a few bugs. Breath some life into your desktop and register a copy of *Scalos* today.

Continued overleaf ➡

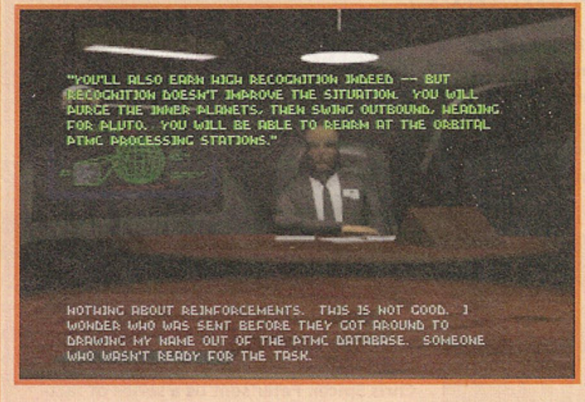
ACCELERATED DESCENT

-ScreenPlay-/ADescentPPC
-ScreenPlay-/ADescentPPCW3D

The first Amiga versions of Parallax's 3D blaster appeared over a year ago. These ports have been repeatedly updated since that time and two new versions are presented here, both of which run only on a PowerPC Amiga under WarpOS. *ADescent* was the first game to support the use of 3D graphics hardware by directly using the 3D processing capabilities of the ViRGE chip on phase 5's CyberVision 64/3D. Now it's also one of the first games to support hardware acceleration via Haage and Partner's *Warp3D* system.



Warp3D provides a hardware independent *API* so that programmers can easily access any 3D graphics hardware attached to an Amiga. It currently supports the Permedia-based CyberVisionPPC and BlizzardVisionPPC, and the ViRGE-based CV64/3D. Drivers are also planned for forthcoming cards like the Voodoo 3D-add-on for the PicassoIV.





Descent is a whole lot faster and a whole lot more fun with 3D acceleration.

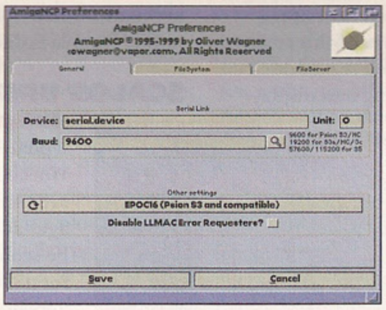
AMIGA NCP

-Serious-/Comms/Other/AmigaNCP-20

Psion's palmtop computers are really fantastic little devices. The only problem is that the communications software shipped with them only comes in PC, Mac or Archimedes flavours. What do you do if you own an Amiga? The answer is to get yourself a copy of *AmigaNCP*.

AmigaNCP is a suite of programs by Vaporware's Olli Wagner and permits the sharing of files between an Amiga and a Psion S3 or S5. The programs are based around a shared library, amigancp.library, which takes care of the serial communications protocols. The other components include a fileserver which allows you to export Amiga devices to your Psion, a filesystem which allows you to mount the Psion's devices as AmigaDOS volumes and a print server which allows you to print documents on your Amiga's printer, directly from the Psion.

Give your Amiga a portable companion with *AmigaNCP*.



The whole system is configured by an easy-to-use preferences program with which you can set options such as the automatic character set conversion of transferred files and the hiding of icon files from the Psion.

AmigaNCP is shareware. It may be registered online at Vapor's website at http://www.vapor.com/

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This *AFCD* has been thoroughly scanned and tested at all stages of production. We recommend that you always run a virus checker on ANY software before running it. Future Publishing Limited cannot accept any responsibility for disruption, damage and/or loss to your data or your computer system which may occur while using this disc, the programs or the data on it. Ensure that you have up-to-date backups of data contained on your hard drives before running any new software. If you do not accept these conditions, do not use this disc.

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If your *AFCD* is defective, please return it to the address below. Please make sure you have followed our installation procedures correctly to ensure that there is no physical problem. Please send us the *AFCD* along with a description of the fault (not forgetting your name and address). A new working version should be returned to you within 28 days. The return address for faulty discs is:

TIB PLC • UNIT 5 • TRIANGLE BUSINESS PARK • PENTREBACH • MERTHYR TYDFIL • CF48 4YB

Your *AFCD* should only need replacing if the CD itself cannot be read. If you're experiencing problems with an individual application, phone our technical support line.
This is open between the hours of 2pm and 5pm every Tuesday.
Tel: 01225 442244 Fax: 01225 732341
Email: amformat@futurenet.co.uk
(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD44* – *Amiga Format* issue 128, October.

Please tell us:

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CU Amiga CDs nos.1, 4, 5, 6 and 8-16. £2.50 each including postage. ☎ Roger 01142 585835 or email rogerbu@callnetuk.com

Blizzard 1260 (68060) turbo accelerator card for A1200 with 16MB RAM installed. Cost £340, accept £200. Boxed as new. ☎ 01636 681882

32c Teac CD-ROM £30, Aminet CDs 23-29, Nemac 4 CD, In-to-the-net CD £4 each. All plus P&P. ☎ 01283 558233, email treva@exl.co.uk

A1200 tower case including PCMCIA "right angle" adaptor and PC keyboard, 3.5" HD stackable to add 3.5" HD, 200W PSU, four drive bays. Offers please. ☎ Dave 01904 624637.

HiSoft Whippet £25, Aura Sampler and Soundprobe £25, Amiga 1200 spare Keyboard £7, MakeCD Software, boxed, £20. Email chris@cox180.freeserve.co.uk

A1200, 1.2GB internal drive, 8MB RAM, Blizzard 1230-IV, monitor, Squirrel SCSI, 4x CD-ROM, 28.8K modem, HD floppy, speakers, MIDI interface. Serious software, games, AF back issues. £500. ☎ 01494 445806 (evenings).

32MB 72-pin SIMM and FPU, brand new, £35 for both. 4MB memory expansion board, £10. ☎ Geoff 01983 882659 or email geoff.mummery@ukonline.co.uk

Apollo 1240, 68040/28MHz accelerator board for Amiga 1200, 32MB of onboard fast RAM and FPU. Worth over £160 new, yours for £110, including P&P. ☎ 01302 874439 after 6pm or email kevsamiga@hotbot.com

A1200 Tower, 66MB RAM, Blizzard 68030 CPU, 68882/50MHz FPU, fast SCSI 2, 4.3GB SCSI hard drive (brand new), 8x SCSI CD-ROM, 32x IDE CD-ROM, PC keyboard, HP Deskjet 600C Printer, US Robotics Sportster Flash modem, 1084 monitor (nearly broken). Loads of software, Internet ready, nearly 75 CDs. A4 SCSI flatbed scanner (needs software to run). Sell for £700 ono. ☎ 01202 466912 – leave a message and I'll ring back or ☎ 01202 650013 and ask for Tony.

External 8x CD-ROM, Squirrel software and manual. Power Computing model. £70. ☎ 01283 213996.

CUCDs 9-19, £3 each. AFCD9, £3. Wordworth 6 CD, no reg, £5. A1200 4MB upgrade with clock, £15. All items plus P&P. ☎ 01703 788391 after 6pm.

Final Data 2, £25; Final Writer 5, £25; Directory Opus, £15. All with manuals and boxed. Also many games. ☎ 01692 598761.

A600 with mouse, three joysticks and 50 games, plus office programs, manuals, etc. £60 ono. ☎ 0121 3605833 (evenings). Birmingham.

A1200, 6MB RAM, 800MB HD, 8x CD-ROM drive, Citizen Swift 9 printer, loads of software, second floppy drive, £230 ono. ☎ 01235 224034 or 07901 657195.

Blitz Basic 2.1, unused, £12; Interbase 2.0 £4; Genesis, The Third Day Landscape Generator £10; and 21 boxed original games £5 each. £95 ono for all. ☎ 01709 814296. All the above are + P&P.

Microvitec Multisync 14" monitor for all Amigas. Autosyncs to your Workbench screenmode. Run your Amiga desktop in 800x600 or higher. As new, with manual and RGB port adaptor. Will accept £90. ☎ 01636 681882

Blizzard 1230IV accelerator, complete with 50MHz FPU, 48MB RAM, SCSI adaptor and SCSI cables. £120. ☎ Matthew 01282 869621 after 6pm.

'030 boards for A600 and A1200. Both 40MHz. 4MB on A600 board. FPU and MMU on A1200 accelerator. Both vgc. Ross Whiteford, Cordon Mains, Abernethy, Perthshire, Scotland, PH2 9LN.

Apollo 1260/66MHz, 8 months old, selling to upgrade to PowerPC. £250 ono. ☎ Adrian 01308 458838 after 6pm.

Commercial games for sale: Turtles: The Coin Op! £5, Theme Park ECS version £10, plus 11 PD disks at £1 each. Also, Amiga Classix CD-ROM £10. ☎ Elliott 01702 582621 (evenings).

Amiga monitor, 1084S Amitek, clean, modern looking, nice display, £30 plus postage. 38 boxed Amiga games, original disks, manuals, etc. £2 each plus postage. ☎ 01768 885287.

Almost new 4MB (upgradable to 8MB) memory expansion for A1200 trapdoor fitting. £30 ono, including UK P&P (delivery at purchaser's risk). 01732 355658 or email KIMac@free4all.co.uk

Memory board with 4MB SIMM. £30 ono. ☎ 01757 702256

Commodore A570 CD drive for A500+ with power supply and three CD Caddys, some CD software. £60 including postage. Email lee@lthake.freeserve.co.uk

PPC 240/'040 accelerator, 64MB RAM, boxed as original, £150. BVision 8MB graphics card, unused, £100. A1200 tower, 3.2GB, Power Flyer, 36x CD-ROM, Amiga keyboard, O/S3.1, 15" monitor and scandoubler, software, £200. ☎ 01606 350414 (Cheshire).

BVision and CyberGraphX v4.1 CD, £125. PPC 603e 200MHz ('040) plus 32MB SIMM, £200. Power Flyer and raisers, £40. OS3.1 (A1200), £30. MicroniK tower and official mouse, £80. Genetic species £15, Quake £15, Kang Fu £5, OXYPatcher £5. ☎ Les 01482 343642 or 320461 or email Lrailton@yahoo.com

Blizzard 50MHz '030 Turbo accelerator board for A1200 with 8MB of memory. £55. ☎ Derek 01942 876716.

A1200, 40MHz 68030, MMU and FPU, 8Mb. 170MB hard drive, Citizen ABC-24 colour printer, Philips monitor, over 500 disks. Boxed games, joysticks, mice, Amiga magazines. Includes 2MB A600. £350 ono. ☎ 0151 9206101.

WANTED

Zorro II graphics card (Picasso2/CyberVision64/3D). ☎ Paul 01983 533342 (work number) or email sniknej@hotmail.com

A3000/A4000 motherboard wanted, will consider a complete system if cheap. Good money paid or will part exchange basic PC or A1200. ☎ James on 01724 338025 or email holleyx@aol.com

TFX flight sim instructions from CU Amiga magazine, October '97. ☎ Andrew 01372 454358 (after 6.30pm).

Amiga Format issue 121 (March 1999) with cover CD – be sensible with the price! Email sean@visions-mag.freeserve.co.uk

Squirel SCSI interface (the Classic variety will be okay!). Email me – sean@visions-mag.freeserve.co.uk – with price details.

Music X v2 urgently required. Email rocky@cisl.ie

My VIDI Amiga is broken! Need one as soon as possible. ☎ 0171 6225576.

Word processor floppy disk for Commodore 600 with instructions. Also Kickstart 1.1 or higher for game. ☎ 01228 521198.

Lightwave v4, preferably v5 CD-ROM. Please ☎ 01405 860798 any time.

Lionheart, original boxed game. Gods, original boxed game. Must be complete and in good condition. Will pay asking price. ☎ 01823 350067.

I wish to upgrade from Final Writer Lite to full program. Can you help? ☎ Brian 01772 736164 or 01772 234131 during office hours.

Desperately seeking Image Master RT and Montage 24 graphics software. Cash waiting. ☎ John 01603 743827. Email john@woodgate.freeserve.co.uk

Easystart software A1200 for Citizen ABC printer. Also, Easystart for Windows DOS. I will purchase. ☎ 01482 711241.

Does anyone have Amiga Format CD issue 123 with disc? Back issues could not help. In good condition please. Will pay for all costs. ☎ 01252 876636, email petedarrell@currantbun.com

PERSONAL

Also see the AmigaAngels document on our CD.

Issue 3 of the World Of Amiga disk magazine is available now from http://www.trogsoft.freeserve.co.uk/woa.htm.

BBSes

Send your BBS ads to the usual Reader Ads address. BBS ads will be printed for three issues.

Total Eclipse BBS, ☎ +44 (0) 1983 522428, 24 hours. 33.6K, home of Liquid Software Design and MAX's Pro support. Friendly sysop, 8.6Gb of storage, CD-ROM.

Quest BBS, Wakefield. West Yorkshire's largest BBS with over 30,000 files online, including the latest 7 Aminet CD-ROMs. Online weekdays, 6pm-6am and weekends, 2pm-6am. ☎ 01924 250388.

BOBBS, ☎ 01243 371644, online 24 hours. Based in Hampshire, South East, host for Powernet. Loads of files, home of BullRPG, The best Amiga Lord clone. Speeds up to 56K. Call now!

Skull Monkey BBS, Lincoln. Online 24 hours. ☎ 01522 887933. Friendly sysop. Email sns@skullmonkey.freeserve.co.uk – keeping the Amiga alive.

Elevate BBS, Hants, online 24 hours. ☎ 01329 319028.

Bedlam BBS, Leicester, online 24 hours. ☎ 01162 787773.

Entertainment BBS, Wigan, online 24 hours. ☎ 01942 221375.

Frost Free BBS, ☎ 01484 327196 (Slaithewaite, W. Yorks).

The Forum! BBS online 24 hours, Kilmarnock, Scotland. Over 35 members, 2,000+ files available, including games, pics, utils, etc. Sysop: Jamie Maguire. Run by a software development student. ☎ 01563 540863. 36K.

Bill's BBS, Cumbria, online 24 hours (mail only between 2.30am and 3.30am), ☎ 01229 434393 or 0870 7878615. Sysop: Bill Clark. Visit http://cumbria.cjb.net, email billsbbs@cornerpub.com or bill.clark@ukonline.co.uk. Supports Fidonet. Loads of free files, games, doors, quizzes, etc. Unlimited downloads.

Zodiac BBS, Hants. Online 11am-7pm 7 days a week. ☎ 01243 373596. Sysop: Destiny Co. Sysop: Axl. Running Maxs Pro v2.11, Hellnet. Lots of files.

Alpha Zone BBS, over 10,000 files, online CD-ROMs, 56,000bps and free email. ☎ 01788 551719 after 10pm.

On The Oche BBS, Waterlooville, online 24 hours. ☎ 01705 648791.

Moonlight BBS, Bedford, online 6pm-8am, 24 hours at weekends, ☎ 01234 212752. Sysop: John Marchant. Email gnome@enterprise.net. Official Transamiga Support BBS, unlimited downloads, very friendly sysop with excellent Amiga knowledge. Aminet online. Run by an experienced Amiga programmer who will help for free.

X Zone BBS, supporting the Amiga for over two years. Do you want the latest files? ☎ 01635 820590, 6pm-1am, modem callers only (33.6K). Call now.

Arachnoids BBS, Leicestershire, online 24 hours, ☎ 01509 551006.

Xanadu BBS, Wigan, online 24 hours. ☎ 01942 746342.

Echoes BBS, (Camberley). Line 1 ☎ 01276 502641, 56K, 24 hour. Line 2 ☎ 01276 502642, 33K, 24 hour. Sysop – Steve Barnett. http://surf.to/echoes.bbs Latest Aminet downloads, nine online CD-ROMs, Fidonet and other mail networks. Offline reading available and free email to all members. In fact, free everything – no subs of any kind as the BBS is run for the love of the Amiga and Xenolink software.

USER GROUPS

User group ads will be printed for three issues.

United Amiga User Group, est. 1986. Technical support, magazine, free coverdisc, Internet book search, PD library, digitising and scanning. Send SAE to Martyn Sherwood, 13 Rodney Close, Rugby, CV22 7HJ.

Amiga Support Association. New Amiga Group starting up intending to help people with their systems in the Southampton/Fareham area. Monthly meets to be arranged. Please contact Phil for more information: ☎ 01703 489701 or email Snood@UKOnline.co.uk

Will you, can you, do you want to or do you need help with your Amiga? If so, please ☎ Terry 01709 814296 (Rotherham).

West Lancs User Group. Sundays, 1pm-4pm at St. Thomas School Hall, Highgate Rd, Upholland. ☎ 01695 623865, email ralph@twiss.u-net.com. Help and advice, novices and experts welcome. Printing and scanning done for free. We also have a PC section.

Is there anybody in the Northamptonshire area interested in starting up a new user group? Please contact me: ☎ 01536 724309 or email nsthomas@ukonline.co.uk.

Live in the west/Wales? No Amiga owning mates? Then be one of the first to join the Wales and South West Amiga Group by mailing mazz@sucs.swan.ac.uk or calling 07801 453571!

The Amiga free helpline needs helpers, especially with regard to video, music, radio, graphics cards, PPC and digital cameras. Also, anything else that you can think of. ☎ Terry 01709 814296.

Workbench, the Manchester Amiga user group. We meet on the first Thursday of each month at 7:00pm and offer general Amiga chat. ☎ 0161 839 8970. Also, check out our website at: www.workbench.freeserve.co.uk. Alternatively, email: mail@workbench.freeserve.co.uk.

Want the latest reviews, news, interviews, articles? then visit the NEW AIO website at http://www.aio.co.uk, or visit #amos on ircnet, Saturday 9pm-midnight.

Amiga users – do you need help? Amiga users – can you help? If so, contact Terry for more details. ☎ 01709 814296.

Medway and Maidstone Amiga collective. Meets monthly. Advice at all levels. Experts and beginners wanted. ☎ Dave 0961 809466. Support your local user groups!

Join a new email club for Klondike, a Reko Productions game. Cardset creators and cardset collectors, Amiga and PC. Email kevin@reko.karoo.co.uk (make friends).

Bournemouth: Dorset/Hampshire. Anyone interested? User group contacts. Amigan, one year, seeks new/old users for chat/helping each other. Email to start, can/will post later if not online. gctshe_m@mail, bournemouthandpoole-cfe.ac.uk.

New Amiga sound and demo association seeks input, contacts and support to form a user group based around the Amiga music and demo scene. Interested? ☎ Daev 01243 864596 or 0961 985925.

Interested in Internet Relay Chat? Why not visit #Amigazone on Dalnet? We are a friendly bunch and meet at 10pm every day. Visit our website at: http://www.tsd-ltd.demon.co.uk.

Greenford Computer Club. 180 Oldfield Lane South, Greenford, West London. Meets: Thursdays 7-10pm. Everyone welcome. Anything Amiga. ☎ Richard Chapman 0181 9988599 after 7pm weekdays, all day weekends, or email if97rrc@brunel.ac.uk.

Great Yarmouth user group. Anyone interested in joining this new group, ☎ John 01493 722422.

Any Amiga users in Birmingham wanting to set up a user group? Please ☎ Hitesh 0121 6056452.

Continued overleaf ➡

Amiga free helpline needs helpers. Also, it needs to help other Amiga users. If you fit into either category, ☎ Terry on 01709 814296 for more information.

SEAL, South Essex Amiga Link. Meets twice monthly at Northlands Park Community Centre, Basildon, Essex. Offers help, advice, tutorials and presentations on popular software and hardware. Also offers scanning, printing, email and a 36 page A4 magazine. Contact Mick Sutton, 20 Roding Way, Wickford, Essex. ☎ 01268 761429 (6-9pm). Email seal@thunder.u-net.com or visit http://seal.amiga.tm.

SHOPS

AUSTRALIA +61

AmigaTech Australia, 17 Thompson Circuit, Mill Park, Melbourne, 3082, Victoria. ☎ 03 9436 5555, fax 03 9436 9935, email r.palmer@amigatech.com.au or visit http://www.amigatech.com.au
Stocks all Amiga products, including a new A4000 tower and the latest products from phase 5.

Amiga Innovations, P.O. Box 114 Osborne Park, Western Australia, 6917. ☎ /fax 08 9349 0889, mobile 0408 929827. Email dwark@vianet.net.au or visit http://surf.to/amigainnovations
Provides Amiga software and hardware support and stocks all new Amiga hardware and software.

Unitech Electronics, 8b Tummul Place, St. Andrews, Sydney, NSW. ☎ 02 9820 3555.
All hardware and software and also make own cables. Very professional and helpful.

G. Soft Pty Ltd, Shop 4/2 Anderson Walk, Smithfield, South Australia, 5114. Also at 33 Adelaide Road, Gawler, South Australia, 5118. ☎ 08 8284 1266, email gsoft@cobweb.com.au
New and used hardware and software, repairs, tech support and advice. Family run, helpful, will custom-make tower systems and will give any hardware a custom colour scheme of your choice.

Computa Magic, 75 Spence Street, Keilor Park, Victoria. ☎ 03 9331 5600, fax 03 9331 5422.

Desktop Utilities, Shop 13, Manuka Court, Manuka, Canberra. ACT. ☎ 02 6239 6658.

MVB Computer Supplies, 506 Dorset Road, Croydon, Victoria. ☎ 03 9725 6255.

Synapse Computers, 190 Riding Road, Hawthorne, Queensland. ☎ 07 3899 0980.

AUSTRIA +43

M.A.R. EDV Systeme, Karlsplatz 1, A-1010 Wien. ☎ 1505 7444.
Sells a range of hardware and software and also offers an Amiga repair service.

Point Design, Jürgen Schober, Muchargasse 35/1/4, A-8010 Graz. ☎ 0316 684809, fax 0316 684839, email office@pointdesign.com for questions about products and support, or order@pointdesign.com to order a product.

BELGIUM +32

AFI (Applications & Formations Informatiques), Clos Del 'Me 21, 4431 Loncin (Liege). ☎ 4239 0093, fax 4239 0224, email mborremans@arcadis.be
Can provide help on most serious subjects. Stocks the full Amiga range with a good selection of second-hand hardware. Aminet CDs are also available, as well as the most commonly used Amiga applications.

Click!, Boomsesteen Weg 468, B-2610, Wilrijk. ☎ 3828 1815.

Amiga Service, Rue Du Nord, 93, 6180 Courcelles. ☎ 71 458244.
Stocks PD disks, CD-ROMs, software, hardware and offers services like scanning, hard drive recovery and laser printing.

Amiga City, Avenue du Prince, Heritier, 176, 1200 Brussels. ☎ 2736 6111.

Generation Amiga, Rue de l' Eglise 22, 1200 Brussels. ☎ 2538 9360.

Digital Precision, Chaussee de Jette, 330, 1090 Brussels. ☎ 2426 0504.

CANADA +1

National Amiga, 111 Waterloo Street, London, Ontario, N6B 2M4. ☎ 519 858 8760. Visit http://www.nationalamiga.com
Stocks all Amiga products, full line, Amiga dealer and service centre.

DENMARK +45

Kiwi Multimedia, Lerager 60, 3600 Frederiksund. ☎ 4738 0639.
Stocks almost all Amiga products, makes the Millennium Amiga.

FINLAND +358

Broadware Oy. ☎ 09 7001 8580, visit http://iwn.fi/broad.html
Sells a good range of accelerators and other items of hardware.

Gentle Eye Ky. ☎ 03 363 0048, email ge@vip.fi
The staff are very skilled and the shop stocks most new products.

Håt Data Huolto Oy. ☎ 09 769 314.
Offers a repair service.

Karelia Computer Ky. ☎ 013 897 088.
Has a good supply of most of the older Amiga hardware and software.

Tsunami Trading. ☎ 02 438 9870, email tsunami@dlc.fi

FRANCE +33

Mygale, Boulevard Raimbaldi 31, 06000, Nice. ☎/fax 4 9313 0635.

Software Paradise, Rue de Lamouly 39, 64600 Anglet. ☎ 5 5957 2088, fax 5 5957 2087, visit http://www.SParadise.com
Official MicroniK distributor.

Pragma Informatique, Route Departementale 523, 38570 Tencin. ☎ 4 7645 6060, fax 4 7645 6055, visit http://www.pragma-info.com

SL Diffusion, Route du General de Gaulle 22, 67300 Schiltigheim. ☎ 3 8862 2094, visit http://195.132.8.152/sld
Very friendly manager.

ADFI Application, Avenue de la Liberation 47, 63000 Clermont, Ferrand. ☎ 4 7334 3434
Distributor of many titles translated into French and have a special agreement with Haage & Partner to sell French versions of their software.

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ADX Datentechnik, Haldesdorfer Str. 119, 22179 Hamburg. ☎ 040 642 02656.
Hardware and software reseller.

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Video titling programs, video games, produces and stocks Epic Marketing stuff.

Non Solo Soft, Casella Postale 63, 10023, Chieri. ☎ 011 9415237, email solo3@chierinet.it
Stocks a complete range of Amiga software and hardware.

WG Computers – Amiga Professional, via Raffaello Sanzio 128 – 50053 Empoli, Firenze. ☎ 0571 711512.
Sells all kinds of Amiga products, hardware, CD-ROMs, utilities, etc.

JAPAN +81

Comi Ami, GCO Pre-Stage Miya, 4-5-6 Honjo Suhida-Ku, Tokyo. ☎ 33636 8471. Visit http://www.amiga.co.jp/

NETHERLANDS +31

Computer City, Zebrastraat 7-9, NL 3064 LR, Rotterdam. ☎ 31 10 4517722, email info@compcity.nl
Sells most Amiga products and the staff are very helpful.

Courbois Software, Fazantlaan 61-63, 6641 XW, Beuningen. ☎ 024 677 2546.
All hardware and software, with many second-hand products at very low prices.

Amigis, Spanjaardstraat 53, 4331 Ep, Middelburg. ☎ 011 062 5632, email info@amigin.nl
Amiga hardware and software.

NEW ZEALAND +64

Comp Karori, Karori Shopping Mall, Karori, Wellington. ☎ 0447 60212, fax 0447 69088, email sales@compkarori.co.nz or visit http://www.compkarori.co.nz or http://www.compkarori.com
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Dealer/distributor who promises best prices for hardware and software.

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Tijolo, 48 – 1170-137, Lisbon.
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Stocks RBM, Melody, net, phase 5, H&P, etc.

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AmigaLine, Moscow, Zorge 6.
☎ 943 3941 or 943 3871, email ambartsumian@glas.apc.org
An Amiga-oriented computer shop.

Amiga Service, Office 309, Bumazhnaya Str 3, Sankt-Peterburg, 198020.
☎ 812 1868842.
A1200 hardware.

SPAIN +34

Club Byte, C/D. Juan de Mena, 21 bajo Izq, 46008 Valencia.
☎/fax (96) 3921567.

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Micsam, Box71, 23121 Trelleborg.
☎ 0410 16001. Email info@micsamdata.se or visit http://www.micsamdata.se
Stocks hardware and software and has a good online catalogue.

Vidamus Multimedia, Idrottsvägen 3, 915 31, Robertsfors.
☎ 0934 55533, fax 0934 55485.
Email info@vidamus.se or visit http://www.vidamus.se
Stocks a wide range of Amiga hardware, towers and serious software, including the official Swedish version of Final Writer.

Syscom, Kvarnplan 6, Jakobsberg.
☎ 08 5803 7300, fax 08 5803 7302. Visit http://www.mematex.se or email syscom.amiga@mematex.se
Stocks Infinitiv towers, phase 5 products and plenty of other hardware, but very little software.

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Games, some hardware, possible to order hard-to-get things. Small, but surprisingly resourceful.

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Amiga Shop 2000, Wallisellenstr.318, CH-8050, Zurich.
☎ 411 3221414.
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Amigaland, Butzenstr.1, CH-8038, Zurich.
☎ 411 482 4750, visit http://www.amigaland.ch
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☎ 01709 512012.
Do repairs and upgrades, helpful staff.

Computer Solutions, Unit 2, Mill Lane Mews, Ashby-de-la-Zouch, Leicestershire, LE65 1HP.
☎ 01530 412983.
New and used software, hardware, stocks full range. Helpful staff.

Cavendish Computers, 144 Charles Street, Leicester.
☎ 0116 2510066.
Hardware (old), games and utilities.

16/32 Systems, 173 High Street, Strood, Rochester, Kent.
☎ 01634 710788.
Stocks games plus new and used hardware, with a helpful staff.

Mays, 57 Church Gate, Leicester city centre.
☎ 0116 2516789.

Computer and Games Exchange, 65 Notting Hill Gate, London.
☎ 0171 2211123.
Stocks second hand games.

Gamestation, Unit 29, The Market Vaults, St. Helens Square, Scarborough, North Yorkshire.
Stocks hardware, games and utilities. Helpful staff.

Dr. Flay's Amiga Clinic @ The Global Lounge, Unit 13, Lemon Street Market, Lemon Street, Truro, Cornwall, TR1 2NS.
☎/Fax: 01872 274037, email dr_flay@hotmail.com or mike@globallounge.co.uk or visit http://www.globallounge.co.uk
Only stocks PD at the moment, but can order anything with good prices on phase 5 hardware. They are an Internet shop and make websites, do design work, advertising and promo material and can also build custom Amiga/Siamese setups.

Planet Games, 3 Royal Oak Buildings, Waterloo Road, Blackpool.
☎ 01253 348738.

Allsorts, 51 Park Road, Wosbrough Bridge, Barnsley.
☎ 0589 272940.
Used games, PD, disk drives, monitors.

HardPlay Software, 2 Broad Street, Newquay, Cornwall, TR7 2BU.
☎/fax 01637 850909.

Vortex Services, 13-15 St. Michael's Square, Ashton Under Lyne, Lancs, OL6 6LF.

Swops, Corner of Bold Street, Fleetwood.
☎ 01253 776977.

SES Computers, 88-90 London Road, Southend-On-Sea.
☎ 01702 335443 or 01702 354624.
Email sesltd@globalnet.co.uk
A large selection of Amiga software, mice and joysticks. Buy and sell hardware and software. Also do repairs and the staff are very helpful.

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Free!

Amiga User Groups

AmigaSoc UK

AMIGA USER GROUPS





AmigaSoc get around a bit, from Cologne to various hostelries in and around London.



Ben Vost pays a visit to AmigaSoc UK – they're not a user group, so what do they do?

Even if you didn't know the first thing about user groups, one Amiga organisation I would have hoped that you'd have heard of by now is AmigaSoc UK. However, after speaking to a number of Amiga owners, it seems that not everyone has.

> "AmigaSoc are especially conscious of trying to provide support for all Amiga owners, not just those on the net."

AmigaSoc UK aren't actually a user group themselves; a more apt description would be an Umbrella Organisation. They try to cover all things Amiga-related that are happening in the UK, and, of course, one such aspect is the user group scene.

They maintain a list of all active UK user groups on their website. As well as simply listing the user groups, they've also provided a postcode-based search function that's able to find user groups near where you live, and shows you a rough estimate of the distance you'll have to travel, which they hope will encourage more people to join their local group.

Another scheme AmigaSoc are running on their website is known as the Lost Souls database. It allows Amiga owners who don't have a user group in their area to register their names and addresses with AmigaSoc. Using the same postcode-based search engine as the user group locator, the Lost Souls database is able to identify Amiga owners who live near each other and can then put them in contact with each other. So far, the Lost Souls database has attracted over 150 names and has been directly responsible for the creation of one new user group and indirectly responsible for at least three others.

In addition to the Lost Souls database and user group locator, AmigaSoc also operate a postcode-based Amiga Dealer and Repair Centre locator on their website.

When I spoke to the guys from AmigaSoc they told me they were especially conscious of trying to provide support for all Amiga owners, not just those with Internet access. While they admit that most of their activities are centred around their website, where you'll find all manner of Amiga-related things, they're also closely involved with a number of UK user groups in an effort to reach a wider audience.

AmigaSoc are also official UK representatives for the UGN (User Group Network), an organisation we'll cover at a later date. This puts them in a unique position because as well as contact with UK user groups, they're also in close contact with many other user group representatives in Europe and America, as well as the top brass at Amiga itself. In fact, many of the events AmigaSoc have organised throughout their three year history have been as far removed from the Internet as possible. In addition to organising seminars at last years World Of Amiga show, which I'm sure many of you will have attended, they also took a group of about 20 Amiga owners from the UK to Computer '98 in Cologne, Germany, last year. They managed to organise flights, hotel accommodation and entrance to the show at a considerable saving and, of course, a lot less hassle for all involved.

Not content with this, they're heavily involved in organising this year's World Of Amiga show to be held in July. As well as the usual exhibitors and events you'd usually associate with the World Of Amiga, AmigaSoc are promising a number of extra events, including a much increased user group involvement, and for the first time ever, secure ticket ordering via the Internet.

If all this wasn't enough, AmigaSoc have also negotiated with a number of Amiga retailers to obtain exclusive discounts and special offers for UK user groups. You local user group should be able to give you more details. If they don't know about this scheme, ask them to contact AmigaSoc for details.

You can find out more information about AmigaSoc by visiting their website at http://uk.amigasoc.org, which, incidentally, is also included on the *AFCD*. This year's World Of Amiga show also has a website which can be found at: http://www.worldofamiga.com

Lost Souls Form

No user group near you? Then fill in this form and send it to: User Groups • c/o Amiga Format • 30 Monmouth Street • Bath • BA1 2BW.

Name ....

Telephone ....

Email ....

Address ....

....

Postcode* ....

***You must fill in your postcode as this is used to calculate how far from other Lost Souls you are.**

afb

Amiga Format's mailing list is getting more active all the time. Over 650 people are now on it. **Why aren't you?**

The afb list is growing every day and there are now more than 650 people on it. When we say people, Amiga owners would be more accurate. That's 650 people who can help with problems, give advice on what scanner or drive to buy and can generally help, while having a bit of fun too.

In addition to such weighty topics as why a switch box isn't functioning properly and which of the three main CD burning packages is the best, afb members have also been discussing the ease of learning Esperanto, arguing about acronyms and abbreviations and discussing all the latest films.

As well as the email which forms the main part of afb's traffic, the website also offers calendar functions so you know when *AF* is coming out and when WoA is, along with a searchable database of all the reviews ever done in *Amiga Format*. You also have the ability to ask other members their opinions on topics as diverse as whether or not they'll purchase the PPC version of *Fusion* in light of the new events to what musical instruments they can play. There's also a page full of links to interesting sites and the whole list is searchable for that email you know someone wrote.

Companies and important individuals lurk on the afb, so you might have your question answered by the person who programmed the application you're asking about, and there's always a new and topical discussion going on.

Join the afb – it's a whole new world of Amiga fun out there...

GETTING ON AFB:

You can subscribe to the afb by going to the following website and signing up:
http://www.egroups.com/group/afb/

If you just want news on when the next issue of *Amiga Format* will be out, we offer that at:
http://www.egroups.com/group/afb-announce/

It's worth joining both lists since they each offer unique things and the announce list usually only has one email every four weeks.



Fax-Back

The fax-back service is growing this issue, but we still want to know what you want to see here. Whether it's tutorials, reviews or features from recent issues or older ones, we're ready to include what you want to see, so just get in touch and give us the details of what you want (feature name, issue number, page numbers) and we'll put it on the list.

If you don't know these details, ask us anyway and we'll see what we can do. Remember that you'll need to have a combined phone/fax or *STFax* and a fax modem in order to take advantage of this service.

HOW TO GET IT:

1. Dial 0906 302 1437 and wait for a fax check.
2. Key in the three-digit code listed in the table on the right for your chosen article.
3. Press Start/Send to receive your fax-back.

If you run into any difficulties, contact our fax-back helpline on 0870 120 1240 (helpline open Monday to Friday, 10am-5pm; calls from the UK are charged at local rate).

Fax-back calls cost 50p per minute at all times. The service takes between two and eight minutes per page, depending on the quality of the phone line, your fax machine's specifications and the number of photographs on a page. Introductory pages with illustrations only won't be included, only pages with text. UK premium rate numbers may not be accessible from overseas.

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AF 126 – AUG 1999

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If you have a feature idea, a long term test, a reader request or you want to be in the Amiga Angels list, send an email to ben.vost@futurenet.co.uk, with "Features", "Reader Review", "Reader Request" or "Amiga Angels" in the subject line accordingly. If you don't have email, a letter to the *AF* address with the same subject headings is also fine.

If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

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Next Month

TOP OF THE POPS!

Tony Horgan *shows you how to create your very own record with your Amiga!*



PLUS:

Possible reviews of:
Tornado 3D, Power Tower A4000, Power Flyer A4000, iBrowse 2, The Prophet, Hexen Deathkings ***and much, much more...***

September issue on sale Thursday July 30th

The contents of future issues may be subject to change – no guarantee is implied or intended.

NEW RED MARS CD-ROM GAME





new product £34.95

new powermovie software

Power Computing is proud to annouce the final release of its long awaited PowerMovie. After its successful review in the May issue of Amiga Format, PowerMovie, the animation editing tool, playmovie and the animation player tool, have undergone a few more changes and extra testing. Below is a list of the key features:





- Full compatibility with all AGA Amigas
- Edit 320 x 200, 256 colours or HAM-8 frames based animations
- Length of animations is only limited by OS restrictions, space on hard drive or CD-ROM drive
- Real time playback, including synchronised soundtrack and sound effects
- Frames can be any size and have different palettes (they will be resized and remapped according to the chosen format)
- Frames can all be played at the same (full) speed, or groups of frames/single frames can be played with a specified delay
- 17 frames per second should be possible on an Amiga with a 50MHz 68030 and 8MB of RAM. 25fps (and more) on a 68040/68060 equipped machine.
- Independent player to record on a VCR, show or view the animation
- A stereo soundtrack can be encoded with the animation (generating one file)
- Separate sound effects can be sychronised to specific frames
- Minimum requirement for decent playback speed is a 6x CD-ROM, 8MB of RAM and 68020 equipped machine

PowerMovie CD-ROM **£34.95 plus p&p**

new product

new amiga OS3.5 upgrade

Power Computing is the Official Distributor of the new OS3.5. We are able to offer a special discount for 3.1 ROM chips when purchased with OS3.5. Below are some of the features of Amiga OS3.5. Available in August.

WARNING - You must have OS 3.1 ROMs and software to be able to upgrade to OS 3.5

workbench

It will no longer be necessary to use a shift key when selecting more than one icon on your desktop. The submenus of the WB screen will be optimised for better handling.

internet

Internet support will come in the shape of a special version of the AWeb browser. The TCP/IP stack will be Miami and there will be integrated network support.

icons

Standard and New icons will be supported. AppIcons will support animation. When selected, icons will glow; when dragged they'll become semi-transparent. You'll be able to set the task priority of a program via Workbench Icon information function.

printers

The printer support will be redesigned completely so that 24-bit printing will be possible from Workbench. CyberGraphX and Picasso96 will be supported. There will only be one Printer Prefs in the future, which will also have a preview window immediately showing the changed settings.

available august £34.95



powerpc

Warpup will be integrated in its latest version. An important part will be the preferences settings which will complement the integration.

installer

It will be possible to open the installer on its own screen and you will now be able to go back to a previous step in the installer too.

datatypes

Datatypes will be improved and 24-bit capable. New datatypes will be provided for AIFF, JPEG and GIF.

special OFFER

3.1 ROM chips at a special price only when purchased with the new Amiga OS3.5.
A500/600/2000 ROM chips - **£14.95** A1200/3000/4000 ROM chips - **£19.95**

OS3.5 PRE-ORDER FORM Please send me an OS3.5 upgrade @ £34.95

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CREDIT CARD No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ ISSUE No. ....

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SPECIAL OFFER 3.1 ROM chips at a special price only when purchased with the new Amiga OS3.5.
A500/600/2000 ROM chips @ £14.95 ☐ A12000/3000/4000 ROM chips @ £19.95 ☐

TOTAL £........... Please add £5 delivery. Make cheques payable to Power Computing Ltd

new red mars game

- Thousands of combinations to make hundreds of units
- Tactical battles
- Exploring, mining and building
- Up to three players can take part
- Missions and freeform games
- Playable on any Amiga with CD-ROM
- Graphics card support

Red Mars CD-ROM	£19.95

miscellaneous games

Breathless 3D game (new low price)	£9.95
Big Red Adventure CD	£9.95

scan doubler and flicker fixer

The NEW internal ScanMagic from Power plugs onto the LISA chip and the ALICE chip with a 15-pin connection to a monitor. This leaves the 23-pin monitor port free for use with a genlock device £49.95

ScanMagic Internal with Flicker Fixer	£79.95
ScanMagic External	£55.95
ScanMagic External Deluxe with Flicker Fixer	£95.95
ScanMagic Ext. Economy with Flicker Fixer	£69.95

monitors - 3yr on-site warranty

15"SVGA monitor for graphic cards or ScanMagic	£125.95
17"SVGA monitor (.26 pitch) for graphic cards or ScanMagic	£245.95
17" monitor (.28 pitch)	£199.95

power modem bundles

Economy bundle 1* 56.6 Kbps Fax/voice including iBrowser web browser, Net & Web	£79.95
Economy bundle 2* as above plus Power Port Junior fast serial interface	£99.95

*All modems are internet ready and include 30 days FREE subscription with Demon Internet.

NEW 56.6 Kbps Fax/Voice modem only	£65.95

new directory opus magellan II

Workbench upgrade and file management system - Amiga Format Gold 97% £49.95

new image fx and aladdin

Amigas most powerful image software - from £29.95

new scala mm400

Multimedia presentation software £55.95

memory expansion UPGRADES

A1200 bare with standard SIMM socket with battery backed-up clock	£29.95
A1200 with standard 4MB SIMM with battery backed-up clock	£35.95
A1200 with standard 8MB SIMM with battery backed-up clock	£39.95
PGA 40MHz FPU for all the above cards	£15.95
A500 1MB Chip RAM battery backed-up clock	£19.95
A600 1MB Chip RAM battery backed-up clock	£24.95
A500 2MB RAM with battery backed-up clock	£49.95
CDTV 2MB RAM	£49.95

amiga 3.1 operating system

Inc. 4 manuals - Workbench, DOS, AREXX & HD

Amiga 3.1 OS for A1200/3000/4000 ROM chips, disks and manuals	£39.95
Amiga 3.1 OS for A500/600/2000 ROM chips, disks and manuals	£35.95
Amiga 3.1 OS disk set and manuals	£19.95
Amiga 3.1 OS A1200/3000/4000 chips only	£25.95
Amiga 3.1 OS A500/600/2000 chips only	£19.95

new products

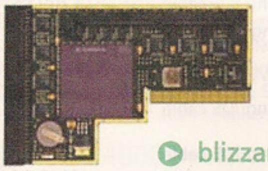
phase 5 amiga accelerator cards

Power Computing is now the sole distributor for the UK of the Phase 5 product range. The range of products include the popular Blizzard series of accelerator cards for the A1200, A2000 & A4000. Check out our web site for all the latest product news - www.powerc.com

blizzard 1240 t/ERC turbo

Accelerator card for Tower housed Amiga 1200 Low-cost 68040ERC (EcoReCycling) 40MHz with MMU /FPU, up to 128MB RAM, optional SCSI 2 controller

Blizzard 1240 33MHz	£139.95
Blizzard 1240 40MHz	£189.95



blizzard 1260 turbo

Accelerator card for the Amiga 1200 68060 50MHz CPU with MMU/FPU, up to 128MB RAM, optional SCSI 2 controller

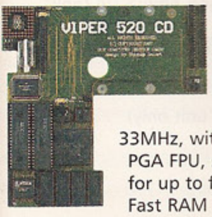
Blizzard 1260 50MHz	£299.95

SCSI-kit IV

Fast SCSI 2 DMA controller for the 1230/40 and 1260 turbo board. The SCSI kit is a fast SCSI 2 DMA controller which allows the instant access to large variety of SCSI-1 and SCSI-2 devices. It's 32-bit DMA engine transfers up to 10MB/sec with up to 80% free CPU time. A second SIMM socket allows the memory to be expanded by 128MB. £69.95

typhoon accelerator cards

Typhoon Lite 68030 40MHz upto 64MB RAM	£69.95
SCSI Adaptor for MK1 and 2 Typhoon	£19.95
Viper MK2 68030 40MHz upto 32MB RAM	£55.95



amiga 500 accelerator card

Viper 520CD, 68020EC 33MHz, without MMU, optional 33MHZ PGA FPU, space for one 2.5"HD, support for up to four IDE/ATAPI devices, 8MB of Fast RAM on board and 3.0 Kickstart ROM including full 3.0 Workbench disk set FAT Agnus slot to fit Mini Mega Chip £99.95

Mini Mega chip (2MB Agnus chip and 1MB extra Chip RAM) £79.95



turbo print 7

Turbo Print 7	£38.95
Upgrade from 5 & 6 to TurboPrint 7	£18.95

epson printers

Epson 440 - colour inkjet	£129.95
Epson 640 - colour inkjet	£149.95
Epson 740 - colour inkjet	£189.95
Epson Stylus Photo 700	£179.95
Epson Black ink cartridge	£15.00
Epson Colour ink cartridge	£17.00
Epson papers	£CALL

blizzard 2040/2060 turbo

Accelerator card for the Amiga 2000 68040 or 68060 50MHz CPU with MMU/FPU, up to 192MB RAM, on-board 50 pin connector fast SCSI-2 interface

Blizzard 2040 33MHz	£239.95
Blizzard 2040 40MHz	£295.95
Blizzard 2060 50MHz	£369.95

cyberstorm mkIII turbo

Accelerator card for the Amiga 3000 T & 4000 T 68060 50MHz CPU with MMU/FPU, up to 128MB RAM, ultra wide SCSI 3 interface slot for Cybervision PPC GFX card, full genlock compatibility

CyberStorm MkIII 33MHz	£339.95
CyberStorm MkIII 40MHz	£389.95
CyberStorm MkIII 50MHz	£469.95

cybervision 64(3D)

CyberVision 64(3D)	£169.95
Picasso Hi-Res graphic card	£249.95

coming soon . . . . .

Melody 20-bit Sound Card	£CALL
Melody A1200 Pro	£CALL
Amplifier MPEG 3 player	£CALL
Twister A1200 Fast Serial Interface§	£CALL

memory modules and fpu's

for accelerator and expansion boards

4MB SIMM	£14.95
8MB SIMM	£19.95
16MB SIMM	£29.95
32MB SIMM	£49.95
32MB SIMM (slim for Blizzard 1260 boards)	£79.95
64MB SIMM (Typhoon and all Blizzards)	£139.95
128MB SIMM (Typhoon and all Blizzards)	£199.95
1MB ZIP RAM static column for A3000	£16.95
GVP custom 4MB RAM module	£49.95
GVP custom 16MB RAM module	£99.95
20MHz PLCC FPU	£10.00
33MHz PLCC FPU	£15.00
40MHz PGA FPU	£20.00
50MHz PGA FPU	£29.95

gvp products

A1200 SCSI Interface for GVP A1230acc.	£49.95
HC4008 SCSI controller and RAM expansion (up to 8MB) for the A2000/A4000	£99.95
GURU ROM	£49.95

NEW SCANQUIX 4 SCANNING S/W

scanquix 4

Award winning scanning software	£49.95

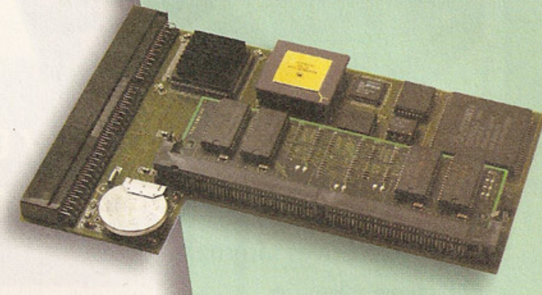
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VDC-100, 250,000 pixel CCD	£99.95
VDC-200, 470,000 pixel CCD built-in flash, memory slot	£199.95
4MB Flash RAM for VDC-200	£49.95
40 Alkaline batteries	£24.95

flatbed scanners

Epson GT7000 scanner (requires SCSI interface)	£199.95
Mustek SP6000 Scanner	£79.95
Image FX scanner driver software	£149.95

EPSON PREMIER RESELLER



typhoon accelerator card









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EIDE cd-rom drives

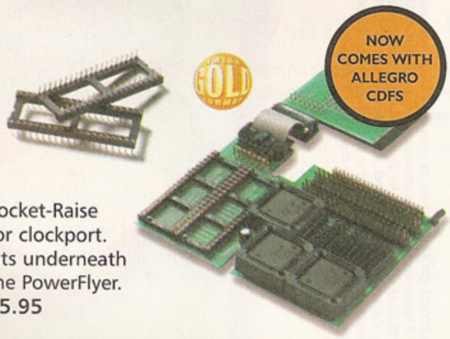
6x Internal EIDE CD-ROM (bare unit)	£29.95
6x External EIDE CD-ROM	£65.95
36x Internal EIDE CD-ROM (bare unit)	£45.95
36x External EIDE CD-ROM	£79.95
40x Internal EIDE CD-ROM (bare unit)	£54.95
40x External EIDE CD-ROM	£89.95

(External includes Buffered Interface, EIDE '99 software, cables and 2 CD titles)

SCSI cd-rom drives

32x Internal SCSI CD-ROM (bare)	£89.95
32x External SCSI CD-ROM	£149.95

(External includes cables, Squirrel SCSI interface with software and 2 CD titles)



Socket-Raise for clockport. Fits underneath the PowerFlyer. **£5.95**

A1200 powerflyer gold edition

Power-Flyer, 4-way enhanced IDE/ATAPI controller, Supports the latest PIO-3 and PIO-4 faster modes, Autoboot from Zip and LS-120, UDMA - 11MB/sec

PowerFlyer Gold Edition	£54.95

NEW A4000 POWER FLYER

new a4000 powerflyer gold edition

- Enhanced IDE/ATAPI controller for ZORRO III bus Amigas
- The first Amiga 3000/4000 E-IDE/ATAPI controller supporting PIO-3 and PIO-4 modes (for up to 16.6MB/sec)
- The transfer is several times faster than any currently available ZORRO II IDE/ATAPI controller
- Fully autoconfig ZORRO III card
- Autoboot from any removable media (ZIP, LS120)
- FastATA'99 - Highly sophisticated supporting software
- Includes Allegro CDFS - the fastest Amiga CD file system, supports video DVD format

On the A4000 two devices canbe attached to a standard IDE controller, and another four to the A4000 Power Flyer. More than one A4000 Power Flyer can be installed at the time. After it has been switched on, the Amiga can boot from any of the Hard Drives connected, either to the Power Flyer or to the Standard IDE controller.

A4000 PowerFlyer Gold Edition	£79.95

4-way buffered int. & IDEfix '97

4-way buffered interface with IDEfix '97, inc. fully registered software	£29.95
3-way IDE cable and 44-pin 10cm cable for above	£9.95

SPECIAL OFFER

8x SPEED

The new Power External UltraSlim EIDE CD-ROM drive, complete with 4 way buffered interface and EIDE '99, Allegro CDFS, PSU, Audio In/Out and cables.

ONLY £69.95



new cd-rewritable drives

4 x 4 x 20 CDRW ATAPI CD-Rewritable Int.	£219.95
4 x 4 x 20 CDRW ATAPI CD-Rewritable Ext.	£329.95
TwinBox with 4 x 4 x 20 CDRW ATAPI CD-Rewritable and 3.1GB Hard Drive	£479.95
Box of 10 CDR discs	£14.95
Box of 5 CDRW discs	£39.95

(All the above external bundles include: case, cables. 4-way IDE interface with IDEfix 97 fully registered, MakeCD, 5 x CDR discs and 1 x CDRW Disc)

NEW ALLEGRO CDFS SOFTWARE

new allegro cdfs software

- The fastest Amiga CD File System.
- The first Amiga file system to support UDF (the Video DVD format).
- Access to: ISO 9660 level 1, 2 and 3, Joliet (Windows95/98 long name) level 1, 2 and 3 RockRidge (with Amiga Extensions), CDDA, UDF (Video DVD)
- Supports Amiga protection bits
- Supports Multisession
- Supports SCSI and ATAPI devices (CD-ROM, CD-R, CD-RW, DVD)
- Supports direct audio grabbing from standard audio CDs

For non-gold edition users Allegro works with EIDE'99 and Powerflyer - available soon

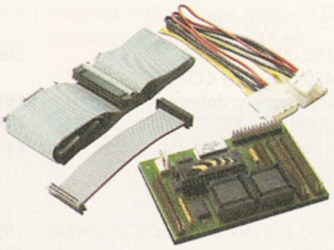
Allegro CDFS only	£10



powerport junior

1 x High speed Serial Internal	£29.95

Fits to internal clock port of A1200



catweasel Mk 2

A4000/A1200 advanced floppy drive controller, can use most PC floppy drives	£49.95

kylwalda - bootadaptor

This bootadaptor fits all Catweasel models and allows you to boot from drive '0'. You can also use a standard PC FDD	£19.95
PC Floppy Disk Drive	£20.00

amazing hard drive deals

Plug and play hard drive. Includes cable and is already partitioned. All HD's come with a 2yr warranty*



2.5" hard drives

2.5" **160MB** IDE including IDE cable	£49.95
2.5" **810MB** IDE including IDE cable	£69.95
2.5" **3.2GB*** IDE including IDE cable	£129.95
2.5" **4.8GB*** IDE including IDE cable	£196.95
2.5" **6.4GB*** IDE including IDE cable	£209.95
2.5" **10GB*** IDE including IDE cable	£319.95

3.5" hard drives

3.5" **3.2GB*** IDE including IDE cable and install disk	£99.95
3.5" **8.4GB*** IDE including IDE cable and install disk	£149.95
3.5" **13GB*** IDE including IDE cable and install disk	£199.95

(8.4 and 13GB HD are supported automatically by the PowerFlyer or by IDEfix 97 using the patch provided, an updated FileSystem is available on www.amiga.de) Please note that cables included with 3.5"HD have standard 40pin headers. If you need to connect a 3.5" HD directly to the A1200 motherboard, you will need a special "stack" cable 44 high density (2.5") to 40 standard (3.5") IDE cable £12.95



new 250MB zip

iomega zip

Zip 100MB external SCSI including Amiga Zip tools, & cable (requires Squirrel or any SCSI interface)	£139.95
Zip 100MB internal ATAPI including 4 way buffered int., EIDE 99 software, IDE cable and 1 cartridge	£99.95
Zip 100MB internal ATAPI (bare unit only)	£75.95
Zip cartridge (100MB)	£12.95
NEW Zip 250MB External SCSI	£189.95
NEW Zip cartridge (250MB)	£19.95



LS120 drive

LS120 120MB Internal ATAPI including 4 way buffered i/f, EIDE 99 software, IDE cable and 1cartridge	£89.95
LS120 120MB Internal ATAPI (bare unit only)	£69.95
LS120 120MB External ATAPI including 4 way buffered i/f, EIDE 99 software, IDE cable and 1 cartridge	£139.95
LS120 cartridge	£9.95



floppy drives

A500/A600/A1200 Internal Drive	£34.95
A2000 Internal Drive	£39.95
PC Floppy Disk Drive	£20.00
PC880E External for all Amiga models	£39.95
XL 1.76MB External for all Amiga models	£65.95
XL 1.76MB Internal for A4000	£60.95

squirrel interface

Squirrel interface - suitable for any scsi-device	£39.95

a1200 power tower

Power Tower Bare £119.95

Power Tower 1
Power Tower plus A1200 motherboard, mouse, PC keyboard and FDD £319.95

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Power Tower, A1200 motherboard, mouse, PC keyboard, 68030 40MHz, 8MB of RAM, 3.2GB Hard Disk, IDE buffered interface, EIDE 99 and FDD £499.95

Power Tower 3
Power Tower, A1200 motherboard, mouse, PC keyboard, 68030 40MHz, 16MB of RAM, 32x CD-ROM, 3.2GB Hard Disk, 4-Way IDE buffered interface, EIDE 99 and FDD £579.95

Power Tower 4
Power Tower plus A1200 motherboard, mouse, PC keyboard, FDD, 68030 40MHz, 40MHz FPU, 32MB of RAM, 32x IDE CD-ROM drive, Internal IDE Zip drive and 1 cartridge, 3.2GB Hard Disk, internal Scan Doubler inc. Flicker Fixer, 15" SVGA monitor, 4-Way IDE buffered interface inc. EIDE 99 and external audio port with speakers £899.95

new a4000 power tower

New tower case for the A4000 including Zorro Bus Board, 7 Zorro II/III slots, 2 video slots, 5 PC- ISA slots, 230 watt power supply unit, 3 x 5.25" external access bays, 2 x 3.5" external access bays and 6 x 3.5" internal access bays £189.95

power tower accessories

Zorro IV	£125.95
Zorro IV Video Adaptor	£24.95
PCMCIA "V" adaptor	£19.95
External audio port	£15.95
"Y" cable to mix CD audio to the Amiga audio	£9.95
50Pin(M) to 25Pin(F) SCSI Converter	£19.95
Power SCSI Adaptor	£19.95
68Pin SCSI to 50 SCSI Converter	£24.95
SCSI III Terminator	£24.95
SCSI III 7Way ribbon cable	£39.95
Micronix Zorro kit	£14.95
3-Way 50Pin header flat SCSI ribbon cable	£9.95
5-Way 50Pin header flat SCSI ribbon cable	£14.95
3-Way 3.5" IDE cable	£4.95
44 High density IDE cable (5cm)	£4.95
44 High density IDE cable (10cm)	£7.95
44 High density IDE cable (80cm)	£14.95
Stack cable (40Pin to 44Pin)	£12.95
Internal floppy drive extension cable	£4.95

new amiga 1200 motherboards

A1200 motherboard with ROMs £125.95

I/O blix zorro 2 interface

4 x serial, 1 x parallel (optional 2nd port) A2000/4000 £99.95

4way buffered interface/EIDE'99 s/w

- Supports all IDE and ATAPI removable devices
- Autoboot from Zip and LS-120 drives
- 4 IDE/EIDE/ATAPI devices support
- 2 x 3.5" connector, 2 x 2.5" connector, separation and buffering of control signals for both ports
- Works with A600/1200 (kickstart 3.0)
- Buffered interface also works with IDEfix'97
- Support HDD 4GB (up to 32GB) by way of automatic HDD split into 4GB logical units, which guarantees 100% compatibility with the Operating System
- Allows large disks to operate with every filesystem OFS, FFS, AFS, PFS-2
- Includes Allegro CDFS - the fastest Amiga CD file system, supports video DVD format

4way Buffered Int. & EIDE'99 Gold Edition £29.95

For more technical details checkout our web-site - A4000 Tower now available!





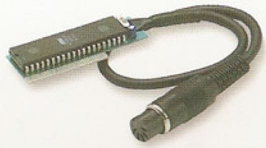


miscellaneous

Amiga 400DPI Mouse & Mat	£9.95
Boing Mouse & Round Mouse Mat	£9.95
Boing Mouse Mat only	£4.95
CD32 Joypad	£9.95
New 4 way adaptor - upto 4 joysticks	£8.95



Not universal



Universal PC/Amiga

keyboards & interfaces

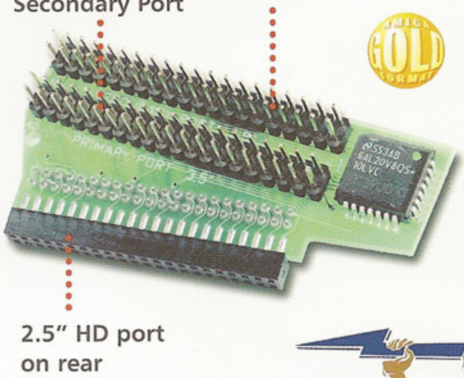
A1200 desktop universal keyboard int.	£19.95
A1200 tower universal keyboard int.	£19.95
PC Keyboard interface only (A1200)	£19.95
Amiga Keyboard interface only (A1200)	£19.95
Original A4000 keyboard only*	£39.95
Original PC keyboard only*	£14.95

*requires keyboard interface



amiga 1200 magic pack

A1200 computer, 2MB RAM & 160MB HD including software £169.95
A1200 as above inc. 160MB HD £199.95









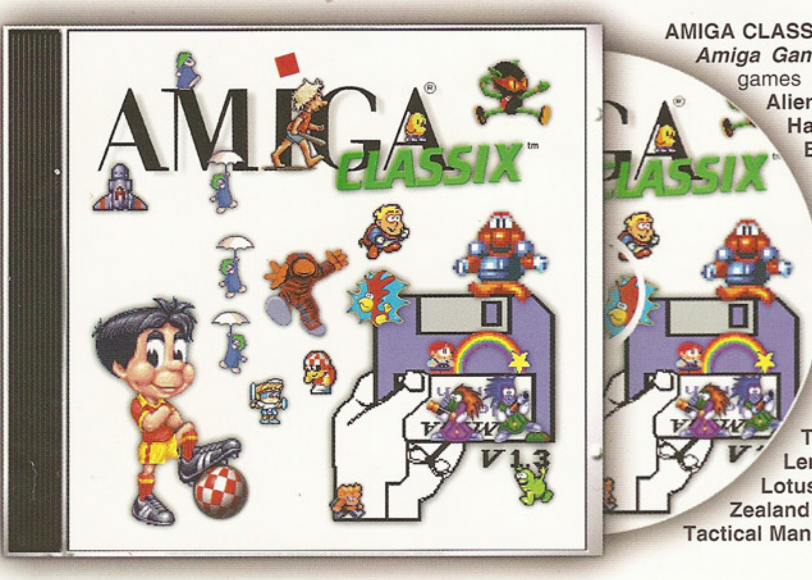


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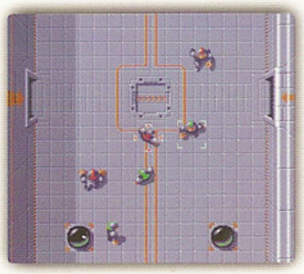
delivery 2-3 days £5 next day £8 saturday £15 northern ireland £15 monitor/tower £8 (u.k. mainland only)

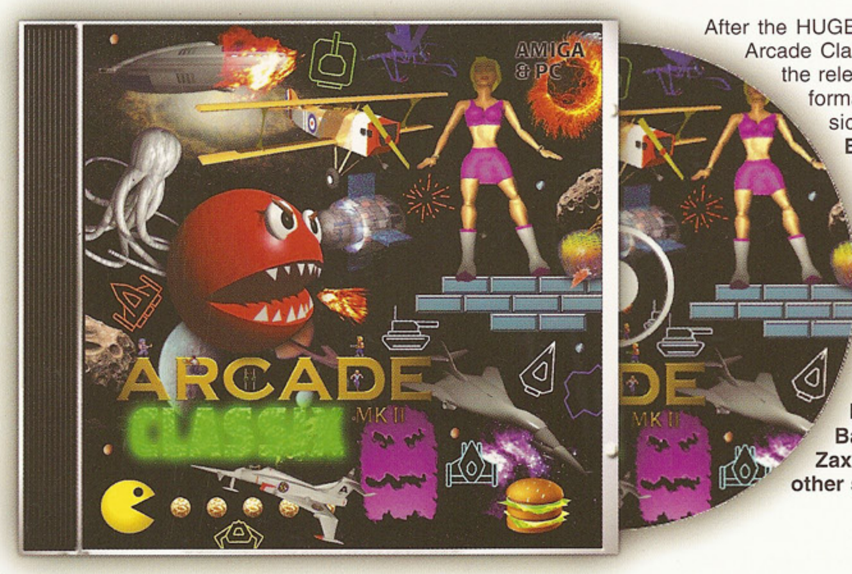
CD-ROMS



AMIGA CLASSIX is an original CD which features **over *400 Classic Amiga Games,*** many of which are **full** versions. Some of the games include **Amegas, Testament, Better Dead than Alien, Charlie J. Cool, Full House Poker, DNA, PP Hammer, Starblade, TechnoCop, Zero Gravity, Boondar, Blaster, Boston Bomb Club, Fruit Salad, Lex, Nemeses, Project Buzbar, North & South, Turn IT, Vietnam as well as versions of Alfred Chicken, Alien Breed 2, Apidya, Apocalypse, Star Dust, Armalyte, Armourgeddon, ATR, Beast Busters, Super Star Dust, Street Fighter2, Syndicate, Steel Sky, Benifactor, Body Blows, Breathless, Bubble & Squeek, Canon Fodder1&2, CoolSpot, Crash Test Dummies, Cyber Punks, Dark Seed, Deepcore, Detroit, Dragon Stone, Dream Web, Fears, First Samurai, Frontier Elite II, Globdule, Gods, Gulp!, The Hustler, Ishar3, K240, Kings Quest VI, Lemmings 2 along with classics like: The Lion King, Lotus III, Soccer Kid, Space Hulk, Minskies, Myth, New Zealand Story, Ruff'n'Tumble, Sensible Golf, Slam Tilt, Tactical Manager, Theme Park, Turrican 3 and more...**





After the HUGE sucess of the original Arcade Classics CD and the Arcade Classics Plus CD we have now excelled ourselves with the release of **ARCADE CLASSIX MKII,** this innovative duel format CD includes **over 1,000 variations** of all time classic games such as: **Asteriods, Battlezone, Bomberman, Bombjack, Boulderdash, Breakout, Centipede, Choplifter, Combat, Donkey Kong, Defender, Dig Dug, Dogfight, Frogger, Galaxians, Hunchback, Space Invaders, Joust, Jumpman, Loadrunner, Mario Clones, Missile Command, Moon Patrol, Mr Do!, Pacman, Popeye, Pengo, Pong, Q-Bert, Quix, Robots, Scramble, Space Wars, Super Sprint, TanX, Tempest, Tetris, Thrust, Trail Blazer, Tron, Uridium, Xevious, Snakes, Beserk, Mutant Camels, Gorf!, Llamatron, River Raid, Elevator, Blagger, Paradroid, Zelda, Dodg'ems, Aztec Challenge, Bagitman, Frantic Freddie, Decathlon, LCD Games, Zaxxon, Original C64 Convertions, and a wealth of other superb retro games.**



